Project No. 1251-100

Crude Oil Tank Farms Project, Agrood Area 30 (Module-1)

PETROJET Enppi EGPC

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

Sr.	Pre-Commissioning and Commissioning Dossier Index	Applicable (Yes/No)
1	**Mechanical Completion Certificate (MCC)**	
2	**Ready for Startup Certificate (RFSU)**	
3	**System Punch Lists**	
4	**System Limits Marked Up P&ID**	
5	**System Index**	
6	**Piping Pre-Commissioning**	
	6.01) Piping Test Packs	
	6.02) Piping Pre-commissioning Check Lists	
7	**Piping Commissioning**	
	7.01) Service Test, GLT, CLT and N2 Purging Certificates	
	7.02) Piping Commissioning Check Lists	

Sr.	Pre-Commissioning and Commissioning Dossier Index	Applicable (Yes/No)
8	**Mechanical Pre-Commissioning**	
	8.01) System Mechanical Index	
	8.02) Equipment Drawings	
	8.03) Equipment Datasheets	
	8.04) Boxing-up Certificates	

	8.05) Grouting Certificates	
	8.06) Pre-Alignment Certificates	
	8.07) Mechanical Pre-Commissioning Checklists	
9	**Mechanical Commissioning**	
	9.01) Final Alignment Certificates	
	9.02) Motor Solo Run Certificates	
	9.03) Mechanical Run Test (MRT) Certificates	
	9.04) Mechanical Commissioning Checklists	
	9.05) Mechanical Supplier Check Lists & Reports	
10	**Instrumentation Pre-Commissioning**	
	10.01) System Instrument Index	
	10.02) Instrument Data Sheets	
	10.03) Instrument Cable Schedule	
	10.04) System Instrumentation Wiring Diagram	
	10.05) Hook-up Drawing (Mechanical & Pneumatic)	
	10.06) Instruments Cables Schedule	
	10.07) Instruments Cables Laying Certificates	
	10.08) Instruments Cables Termination Certificates	
	10.09) Instruments Cables Testing Certificates	
	10.10) Instruments Calibration Certificates	
	10.11) Instrument Loop Checks Certificates	
	10.12) Instrumentation Pre-Commissioning Check Lists	
	10.13) Instrumentation Supplier Check Lists & Reports	
11	**Instrumentation Commissioning**	
	11.01) Instrumentation Function Test Certificates	
	11.02) Instrumentation Supplier Check Lists & Reports	
Sr.	**Pre-Commissioning and Commissioning Dossier Index**	**Applicable (Yes/No)**
12	**Electrical Pre-Commissioning**	
	12.01) System Electrical Index	
	12.02) Electrical Drawings	
	12.03) Motor Datasheets	
	12.04) Electrical Cables Schedule	
	12.05) Electrical Cables Laying Certificates	
	12.06) Electrical Cables Testing Certificates	
	12.07) Electrical Cables Termination Certificates	
	12.08) FAT Reports & Certificates	
	12.09) SAT Reports & Certificates	
	12.10) Electrical Pre-Commissioning Check Lists	
	12.11) Electrical Supplier Check Lists & Reports	

13	**Electrical Commissioning**	
	13.01) Electrical -Commissioning Check Lists	
	13.02) Electrical Supplier Check Lists & Reports	
14	**Red Marked-up Drawings**	
	14.01) P&ID	
	14.02) Instrumentation Drawings	
	14.03) Electrical Drawings	

Enppi PETROJET

Project: 01251-100
CRUDE OIL TANK FARM PROJECT (AGROOD AREA)

Petroleum Pipelines Company

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

Pre-commissioning and Commissioning Dossier Content:

Section	Description	Status
1-	Mechanical Completion Certificate (MCC) Ready For Start-up (RFSU)	
2-	System Punch Lists	
3-	System Limits Marked Up	
4-	FAT Test Report & Certificates	
5-	System Index.	
6.A-	Electrical Pre-commissioning	
6.A.1	General Arrangement and Wiring Diagrams	
6.A.2	Single line Diagram	
6.A.3	Electrical Panel Schedule	
6.A.4	Electrical Cable Schedule	
6.A.5	Pre-Commissioning Check List	
6.B-	Electrical Commissioning	
6.B.1	Commissioning Check List	
7-	Red Mark-Up Drawings (If Any)	

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

1-Mechanical Completion Certificate (MCC)

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EGPC

SYSTEM MECHANICAL COMPLETION CERTIFICATE (MCC)

PROJECT TITLE	:	CRUDE OIL TANK FARM PROJECT (AGROOD AREA)
PROJECT No	:	01251-100
SYSTEM NAME	:	Substation Building Lighting and small power system
SYSTEM ID	:	030-EL-007

THIS IS TO CERTIFY THAT:

- **THE ABOVE SYSTEM HAS BEEN FABRICATED, ERECTED, INSTALLED AND TESTED TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS, SPECIFICATIONS, THE APPLICABLE CODES AND STANDARDS.**
- **ALL PRE-COMMISSIONING RELEVANT ACTIVITIES, TESTS, INSPECTIONS AND CHECKS HAVE BEEN CARRIED OUT FOR THIS SYSTEM AND FOUND ACCEPTABLE.**
- **Q/C DOCUMENTATION OF THE ABOVE SYSTEM HAS BEEN AUDITED BY THE CUSTOMER SITE QUALITY CONTROL AND FOUND COMPLETED.**
- **ALL PUNCH LIST ITEMS CATEGORY (A) IN THIS SUBSYSTEM WERE CLEARED.**
- **THIS SYTEM IS MECHANICALLY COMPLETED ON THE DATE 01/02/2021 AND READY FOR COMMISSIONING (RFC) WITH THE FOLLOWING EXCEPTIONS.**

EXCEPTIONS :

COMPANY	PETROJET	ENPPI	PMC
NAME	M.abd allah	Mohamed Abbas	M. omar
TITLE	Q.C engineer	Site. Mgr.	
SIGNATURE			
DATE	12/04/2021	12/4/2021	18/05/2021

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

2- Ready for Startup Certificate (RFSU)

PETROJET Enppi EGPC

READY FOR START UP CERTIFICATE

PROJECT TITLE	:	EGPC CRUDE OIL TANK FARMS PROJECT (AGROOD-02)
PROJECT No.	:	1251-100
SYSTEM /AREA /PLANT	:	Substation Building Lighting and small power system
SYSTEM /AREA /PLANT No.	:	030-EL-007

THIS IS TO CERTIFY THAT:

- THE MENTIONED SYSTEM /AREA /PLANT IS READY FOR START UP WHERE ALL MECHANICAL WORKS, PRECOMMISSIONING AND COMMISSIONING ACTIVITIES HAVE BEEN SUCCESSFULLY COMPLETED.
- MECHANICAL COMPLETION CERTIFICATE(S) FOR THE MENTIONED SYSTEM / AREA / PLANT HAVE BEEN SIGNED.
- ISSUANCE OF THIS READY FOR START UP CERTIFICATE(S) SHALL NOT RELIEVE CONTRACTOR(S) FROM THEIR OBLIGATIONS TO COMPLETE THE REMAINING SYSTEMS NOR FROM THEIR WARRANTY OBLIGATIONS AND OTHER PROVISIONS OF THE CONTRACT.
- THE FOLLOWING EXCEPTIONS AGREED TO BE CLEARED AFTER START UP AND WILL NOT PREVENT START UP ACTIVITIES.

EXCEPTIONS :

COMPANY	CONSORTIUM	PPC
NAME	Ahmed El Shafie	M. Ibrahim
TITLE	Commissioning Mgr	Elec. engineer
SIGNATURE		
DATE	31-5-2021	

10000-000-EK8-FRM-0006 (03/15)

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

3- System Punch Lists

PETROJET Enppi

PUNCH LIST

EGPC

PROJECT TITLE : CRUDE OIL TANK FARM PROJECT (AGROOD AREA)

PROJECT NUMBER : 01251-100 | **DISCIPLINE:** Electrical

SYSTEM NAME: Substation Building Lighting and Small Power system | **SYSTEM ID:** 030-EL-07

SUB-SYSTEM NAME: | **SUB-SYSTEM ID:**

NO	DESCRIPTION	CAT	ACTION BY	DISP	CLEARANCE APPROVED BY	
1	Panel ~~cables~~ doors joints to be fixed.	B	PTJ	ELE		M. Omar
2	Photo Cell Cable need wire and Cables Marker	B	PTJ	ELE	M. Omar	

CAT: CATEGORY(A,B,C) ,ACTION BY: (ENPPI,CONST.CONTRACTOR,SUPPLIER.....) , DISP: DESCIPLINE(PIP,MECH,ELECT,INST.....)

COMPANY	PTJ	ENPPI	PMC
NAME	Sabry Soleam	Reiss	Mohamed Ibrahim
SIGN.			
DATE	28-3-2021		28-3-2021

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

4- System Limits Marked Up P&ID

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

5- System Index

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

6- Piping Pre-Commissioning

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

6.01- Piping Test Packs

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

6.02- Piping Pre-commissioning Check Lists

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

7- Piping Commissioning

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

7.01- Service Test, GLT, CLT and N2 Purging Certificates

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

7.02- Piping Commissioning Check Lists

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

8- Mechanical Pre-Commissioning

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

8.01- System Mechanical Index

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

8.02- Equipment Drawings

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

8.03- Equipment Datasheets

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

8.04- Boxing-up Certificates

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

8.05- Grouting Certificates

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

8.06- Pre-Alignment Certificates

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

8.07- Mechanical Pre-Commissioning Checklists

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

9- Mechanical Commissioning

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

9.01- Final Alignment Certificates

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

9.02- Motor Solo Run Certificates

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

9.03- Mechanical Run Test (MRT) Certificates

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

9.04- Mechanical Commissioning Checklists

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

9.05- Mechanical Supplier Check Lists & Reports

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10- Instrumentation Pre-Commissioning

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10.01- System Instrument Index

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10.02- Instrument Data Sheets

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10.03- Instrument Cable Schedule

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10.04- System Instrumentation Wiring Diagram

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10.05- Hook-up Drawing (Mechanical & Pneumatic)

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10.06- Instruments Cables Schedule

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10.07- Instruments Cables Laying Certificates

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10.08- Instruments Cables Termination Certificates

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10.09- Instruments Cables Testing Certificates

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10.10- Instruments Calibration Certificates

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10.11- Instrument Loop Checks Certificates

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10.12- Instrumentation Pre-Commissioning Check Lists

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

10.13- Instrumentation Supplier Check Lists & Reports

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

11- Instrumentation Commissioning

Project: 01251-100
CRUDE OIL TANK FARM PROJECT (AGROOD AREA)

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

11.02- Instrumentation Supplier Check Lists & Reports

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

12- Electrical Pre-Commissioning

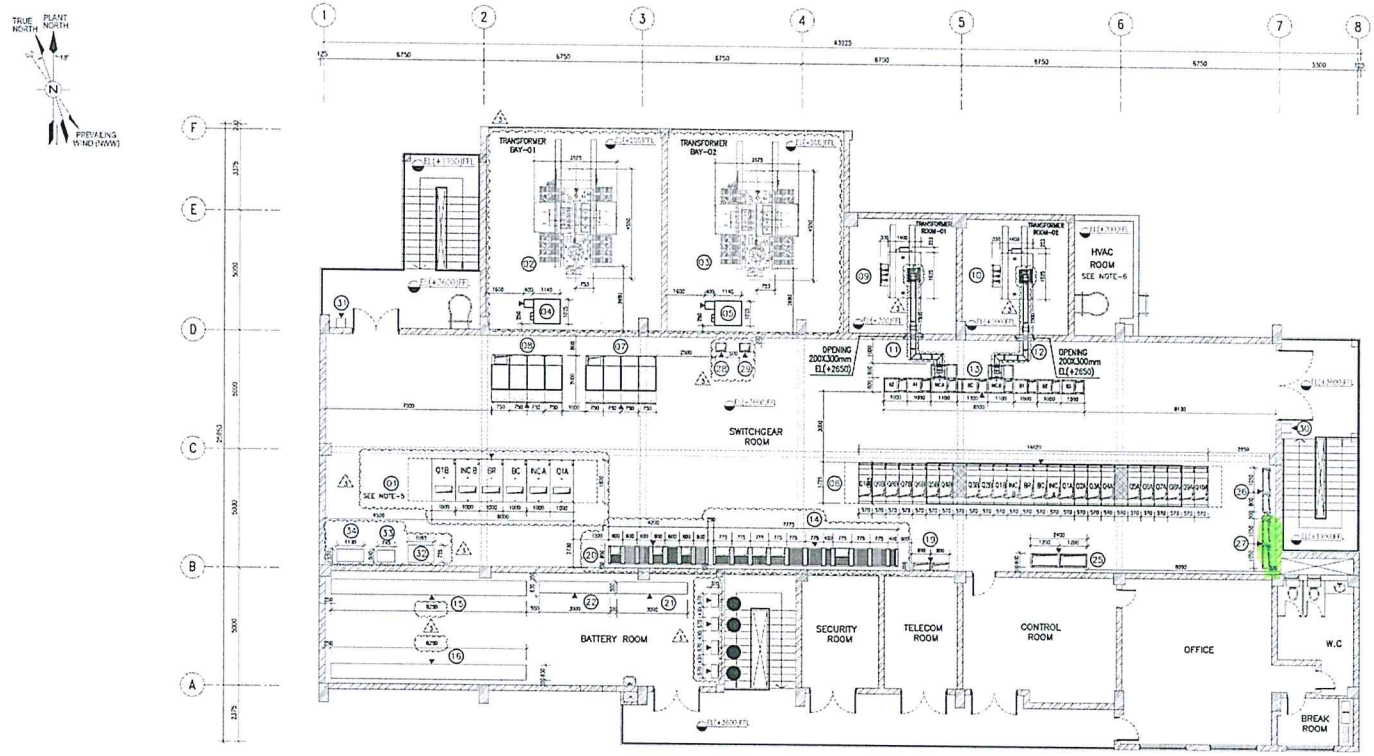
System ID	030-EL-007
System Description	Substation Building Lighting and small power system

12.01- System Electrical Index

030-EL-007	Substation Building Lighting and small power syste	Electrical	030-SUB-LPDP - 1	Power Distrbution Panel	Checklist	EL-23 A /EL-24 A /EL-30 A
030-EL-007	Substation Building Lighting and small power syste	Electrical	C-030-SUB-PC-1	LV Cable	Checklist	EL-31 A
030-EL-007	Substation Building Lighting and small power syste	Electrical	P-030-SUB-LPDP-1	LV Cable	Checklist	EL-31 A

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

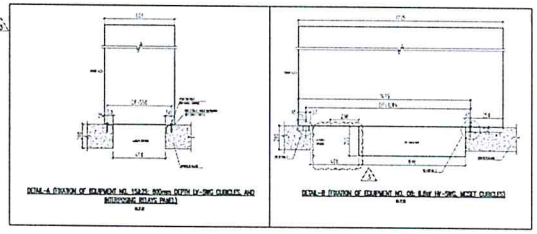
12.02- Electrical Drawings

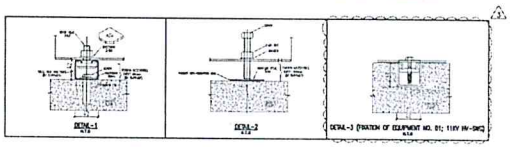


ELECTRICAL EQUIPMENT LIST

EQUIPMENT NO.	EQUIPMENT TAG	DESCRIPTION	FIXATION
01	030-SUB-HVSWG-11	11KV, 1250A AIR INSULATED SWITCHGEAR	FLOOR
02	030-SUB-PTR-1A	11/6.6KV, 8MVA OIL POWER TRANSFORMER	FLOOR
03	030-SUB-PTR-1B	11/6.6KV, 8MVA OIL POWER TRANSFORMER	FLOOR
04	030-SUB-NER-1A	6.6/10KV, 200A/10SEC NEUTRAL EARTHING RESISTOR	FLOOR
05	030-SUB-NER-1B	6.6/10KV, 200A/10SEC NEUTRAL EARTHING RESISTOR	FLOOR
06	030-SUB-HVSWG-EE	6.6KV, 1250A AIR INSULATED SWITCHGEAR	FLOOR
07	030-SUB-PFC-1A	6.6KV, 360KVAR POWER FACTOR CORRECTION	FLOOR
08	030-SUB-PFC-1B	6.6KV, 300KVAR POWER FACTOR CORRECTION	FLOOR
09	030-SUB-TR-1A	6.6/0.4KV, 1000KVA DRY-TYPE DISTRIBUTION TRANSFORMER	FLOOR
10	030-SUB-TR-1B	6.6/0.4KV, 1000KVA DRY-TYPE DISTRIBUTION TRANSFORMER	FLOOR
11	030-SUB-LVSD-1A	0.4KV, 2000A LOW VOLTAGE BUS DUCT	----
12	030-SUB-LVSD-1B	0.4KV, 2000A LOW VOLTAGE BUS DUCT	----
13	030-SUB-LVSWG-1	0.4KV, 2000A AIR INSULATED SWITCHGEAR	FLOOR
14	030-SUB-ACUPS-1	400VAC, 50KVA AC UNINTERRUPTED POWER SUPPLY	FLOOR
15	030-SUB-ACUPS-1-BATT-A	BATTERY RACK-A FOR AC UPS	FLOOR
16	030-SUB-ACUPS-1-BATT-B	BATTERY RACK-B FOR AC UPS	FLOOR
17	030-SUB-ACUPS-CB-A	BATTERY RACK-A CIRCUIT BREAKER BOX FOR AC UPS	WALL
18	030-SUB-ACUPS-CB-B	BATTERY RACK-B CIRCUIT BREAKER BOX FOR AC UPS	WALL

EQUIPMENT NO.	EQUIPMENT TAG	DESCRIPTION	FIXATION
19	030-SUB-UFDP-1	UPS POWER DISTRIBUTION PANEL	WALL
20	030-SUB-DCUPS-1	110VDC, 75A DC UNINTERRUPTED POWER SUPPLY	FLOOR
21	030-SUB-DCUPS-1-BATT-A	BATTERY RACK-A FOR DC UPS	FLOOR
22	030-SUB-DCUPS-1-BATT-B	BATTERY RACK-B FOR DC UPS	FLOOR
23	030-SUB-DCUPS-CB-A	BATTERY RACK-A CIRCUIT BREAKER BOX FORDC UPS	WALL
24	030-SUB-DCUPS-CB-B	BATTERY RACK-B CIRCUIT BREAKER BOX FOR DC UPS	WALL
25	030-SUB-IRP-1	INTERMOSING RELAY PANEL	FLOOR
26	030-SUB-ASP-1	AUXILIARY SERVICE PANEL	FLOOR
27	030-SUB-LPDP-1	INDOOR LIGHTING AND SMALL POWER DISTRIBUTION PANEL	FLOOR
28	030-SUB-AVR-1A	AVR PANEL FOR ON-LOAD TAP CHANGER OF 030-SUB-PTR-1A	WALL
29	030-SUB-AVR-1B	AVR PANEL FOR ON-LOAD TAP CHANGER OF 030-SUB-PTR-1B	WALL
30	030-SUB-EPS-1	SUBSTATION EMERGENCY PUSH BUTTON	WALL
31	030-SUB-EPS-2	SUBSTATION EMERGENCY PUSH BUTTON	WALL
32	------	6.6kV HV SWG LIFTING TRUCK	----
33	------	6.6kV HV SWG EARTHING TRUCK	----
34	------	LV SWG LIFTING TRUCK	----





REFERENCE DRAWING AND DOCUMENTS

01251-100-030-KPP-002	AGROOD AREA (MODULE-1) PLOT PLAN
01251-100-030-AEL-001	AGROOD AREA (MODULE-1) MASTER EQUIPMENT LIST
01251-100-030-CBD-221	SUBSTATION CELLAR FLOOR PLAN
01251-100-030-CBD-222	SUBSTATION FIRST FLOOR PLAN
01251-100-030-KEE-001	AGROOD AREA (MODULE-1) GENERAL ELECTRICAL SINGLE LINE DIAGRAM
01251-100-000-KEE-002	ELECTRICAL SINGLE LINE DIAGRAM 6.6kV HIGH VOLTAGE MOTOR CONTROL CENTER
01251-100-000-KEE-003	ELECTRICAL SINGLE LINE DIAGRAM LOW VOLTAGE MOTOR CONTROL CENTER
01251-100-000-ED9-001	ELECTRICAL DESIGN BASIS

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL ELEVATIONS ARE IN MILLIMETERS.
3. THIS DRAWING IS CONCERNED ONLY WITH SUBSTATION ELECTRICAL EQUIPMENT.
4. ALL EQUIPMENT SHALL BE BOTTOM ENTRY UNLESS OTHERWISE INDICATED.
5. EQUIPMENT NO.1 SHALL BE SUPPLIED AND INSTALLED BY EGPC/CANAL ELECTRICAL DISTRIBUTION COMPANY.
6. ELECTRICAL EQUIPMENTS INSIDE HVAC ROOM (HVAC MCC & LCP) SHALL BE SUPPLIED AND INSTALLED BY PETROJET.

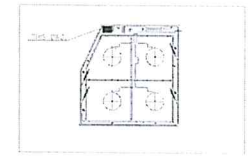
LEGEND

- ELECTRICAL EQUIPMENT
- FUTURE ELECTRICAL EQUIPMENT
- GLAND PLATE
- EQUIPMENT FRONT
- EQUIPMENT NUMBER
- DUMMY PANEL

ABBREVIATIONS

AC	ALTERNATING CURRENT	HV	HIGH VOLTAGE
AVR	AUTOMATIC VOLTAGE REGULATOR	INC	INCOMER CIRCUIT BREAKER
BC	BUS COUPLER CIRCUIT BREAKER	LV	LOW VOLTAGE
BR	BUS RISER	Q	OUTGOING CIRCUIT BREAKER
CB	CIRCUIT BREAKER	SWG	SWITCHGEAR
DC	DIRECT CURRENT	UPS	UNINTERRUPTIBLE POWER SYSTEM
DF	DISTANCE BETWEEN FIXATION POINTS		

KEY PLAN



SCALE 1:100 METERS

REV	DATE	DESCRIPTION	BY	CHECKED	DESIGNED	APPROVED
3	24 08 20	RE-ISSUED FOR CONSTRUCTION	R.M	SH.A	M.R	M.A
2	03 05 20	ISSUED FOR CONSTRUCTION	M.M.A	SH.A	M.R	M.A
1	14 11 19	RE-ISSUED FOR DESIGN	M.M.A	SH.A/M.A	M.A.R	H.A
0	12 09 19	ISSUED FOR DESIGN	M.M.A	SH.A/M.A	M.A.R	H.A

NOTICE

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EGPC
THE EGYPTIAN GENERAL PETROLEUM CO.
الهيئة العامة المصرية للبترول
EGPC

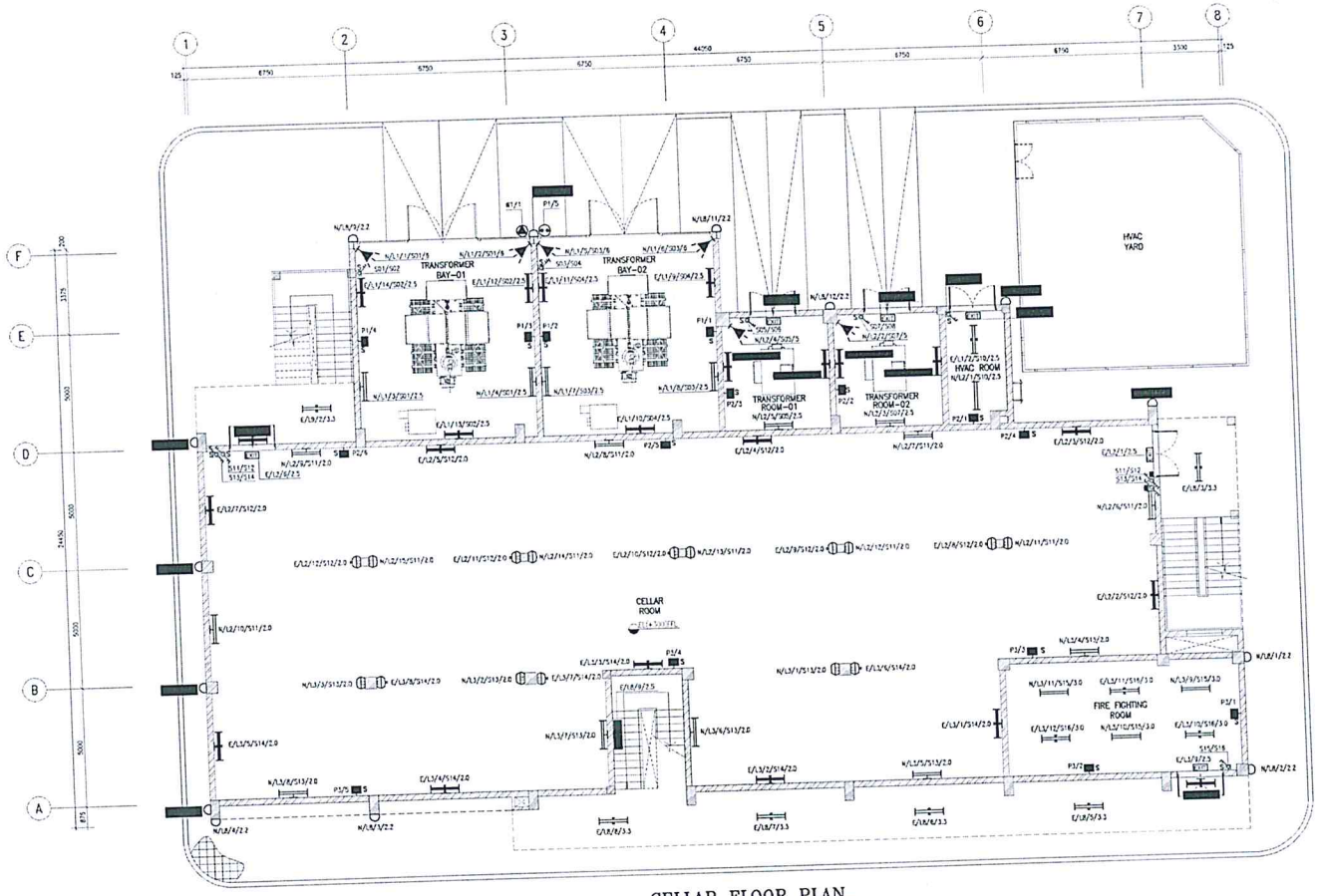
FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC) لاجل الهيئة العامة المصرية للبترول

AT : AGROOD الموقع : مجرود

EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE-1) SUBSTATION ELECTRICAL EQUIPMENT LAYOUT

التركيب الهندسي للصناعات البترولية والكيماوية
Enppi إنبي
ENGINEERING FOR THE PETROLEUM AND PROCESS INDUSTRIES

SCALE	ENPPI DRAWING NUMBER	SHEET	REVISION
1:100	01251-100-030-EEB-001	1 OF 1	3



CELLAR FLOOR PLAN
(AT EL. +300)

SCALE 1:100 — METERS

REFERENCE DRAWING AND DOCUMENTS

01251-100-000-ED0-001	ELECTRICAL DESIGN BASIS
01251-100-030-CE0-221	SUBSTATION AND CONTROL ROOM CELLAR FLOOR PLAN
01251-100-030-CE0-222	SUBSTATION AND CONTROL ROOM FIRST FLOOR PLAN
01251-100-030-CE0-226	SUBSTATION AND CONTROL ROOM ROOF PLAN
01251-100-030-EE0-001	AGROOD AREA (MODULE-1) SUBSTATION EQUIPMENT LAYOUT
01251-100-030-EP5-001	AGROOD AREA (MODULE-1) SUBSTATION LIGHTING AND POWER DISTRIBUTION PANEL SCHEDULE

LEGEND

- 6640 LUMENS, 40.4W, 230V, 50HZ, IP65, SURFACE MOUNTED LED TUBE LIGHTING FIXTURE. FOR FIXATION, REFER TO DETAIL-3 IN SHEET 3 OF 3.
- 6640 LUMENS, 40.4W, 230V, 50HZ, IP65, SURFACE MOUNTED EMERGENCY LED TUBE LIGHTING FIXTURE, COMPLETE WITH BUILT-IN BATTERIES WITH THREE HOURS AUTONOMY TIME, INVERTER AND RELATED ACCESSORIES. FOR FIXATION, REFER TO DETAIL-3 IN SHEET 3 OF 3.
- 6640 LUMENS, 40.4W, 230V, 50HZ, IP65, WALL MOUNTED LED TUBE LIGHTING FIXTURE. FOR FIXATION, REFER TO DETAIL-2 IN SHEET 3 OF 3.
- 6640 LUMENS, 40.4W, 230V, 50HZ, IP65, WALL MOUNTED EMERGENCY LED TUBE LIGHTING FIXTURE, COMPLETE WITH BUILT-IN BATTERIES WITH THREE HOURS AUTONOMY TIME, INVERTER AND RELATED ACCESSORIES. FOR FIXATION, REFER TO DETAIL-2 IN SHEET 3 OF 3.
- 6640 LUMENS, 40.4W, 230V, 50HZ, IP65, WALL MOUNTED LED TUBE LIGHTING FIXTURE. (FIXTURE SHALL BE MOUNTED VERTICALLY ON WALL). FOR FIXATION, REFER TO DETAIL-1 IN SHEET 3 OF 3.
- 6640 LUMENS, 40.4W, 230V, 50HZ, IP65, WALL MOUNTED EMERGENCY LED TUBE LIGHTING FIXTURE, COMPLETE WITH BUILT-IN BATTERIES WITH THREE HOURS AUTONOMY TIME, INVERTER AND RELATED ACCESSORIES. (FIXTURE SHALL BE MOUNTED VERTICALLY ON WALL). FOR FIXATION, REFER TO DETAIL-1 IN SHEET 3 OF 3.
- 21000 LUMENS, 150W, 230V, 50HZ, IP65, WALL MOUNTED LED FLOOD LIGHTING FIXTURE.
- 3457 LUMENS, 30.5W, 230V, 50HZ, IP65, WALL MOUNTED LED CIRCULAR LIGHTING FIXTURE.
- PHOTOCELL WEATHER PROOF, IP55.
- 3W, 230V, 50HZ, IP65, LED EMERGENCY EXIT LIGHTING COMPLETE WITH BUILT-IN BATTERIES WITH THREE HOURS AUTONOMY TIME, INVERTER AND RELATED ACCESSORIES.
- 230V, 1PH, 50HZ, 16A, IP55, ONE WAY SWITCH SINGLE GANG C/W ILLUMINATION INDICATOR SWITCHED ON WHEN SWITCH IS OFF.
- 230V, 1PH, 50HZ, 16A, IP55, ONE WAY SWITCH TWO GANG C/W ILLUMINATION INDICATOR SWITCHED ON WHEN SWITCH IS OFF.
- 230V, 1PH, 50HZ, 16A, IP55, TWO WAY SWITCH TWO GANG C/W ILLUMINATION INDICATOR SWITCHED ON WHEN SWITCH IS OFF.
- 230V, 33A, 50HZ, IP55 DISCONNECT SWITCH (DS-1 FOR WATER HEATER AND DS-2 FOR HAND DRYERS)
- 230V, 16A, 50HZ, IP55, 3WIRES, 2 PIN CONVENIENCE RECEPTACLE.
- 400V, 32A, 50HZ, IP55, 4WIRES, 5 PIN WALL MOUNTED WELDING RECEPTACLE.
- 230V, 16A, 50HZ, IP55, 3WIRES, 3 PIN WALL MOUNTED CONVENIENCE RECEPTACLE.
- 230/400V, 160A, 50Hz, IP42, LIGHTING/POWER DISTRIBUTION PANEL (LPDP)
- EX — DENOTES EXPLOSION PROOF ZONE 2, IIC, T3. FOR FIXATION OF EX LIGHTING FIXTURE REFER TO DETAIL-4 IN SHEET 3 OF 3.
- F — DENOTES FLUSH MOUNTED
- S — DENOTES SURFACE MOUNTED.

NOTES

- FOR NOTES REFER TO DWG. NO. 01251-100-030-ELB-001 SHEET 2 OF 3.

IDENTIFICATION

- FOR IDENTIFICATION REFER TO DWG. NO. 01251-100-030-ELB-001 SHEET 3 OF 3.

KEY PLAN

- FOR KEY PLAN REFER TO DWG. NO. 01251-100-030-ELB-001 SHEET 3 OF 3.

REV	DATE	DESCRIPTION	BY	CHECKED	DESIGNED	APPROVED
2	27 08 20	RE-ISSUED FOR CONSTRUCTION	R.M	SH.A	A.N	M.A
1	14 05 20	ISSUED FOR CONSTRUCTION	T.O	SH.A	A.N	M.A
0	01 12 19	ISSUED FOR DESIGN	M.M.A	SH.A	Y.A	M.A

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EGPC

FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC)
لاجل الهيئة العامة المصرية للبترول
الموقع : مجرود
AT : AGROOD

EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE-1) SUBSTATION LIGHTING AND POWER LAYOUT

الشركة الهندسية للصناعات البترولية والكيماوية
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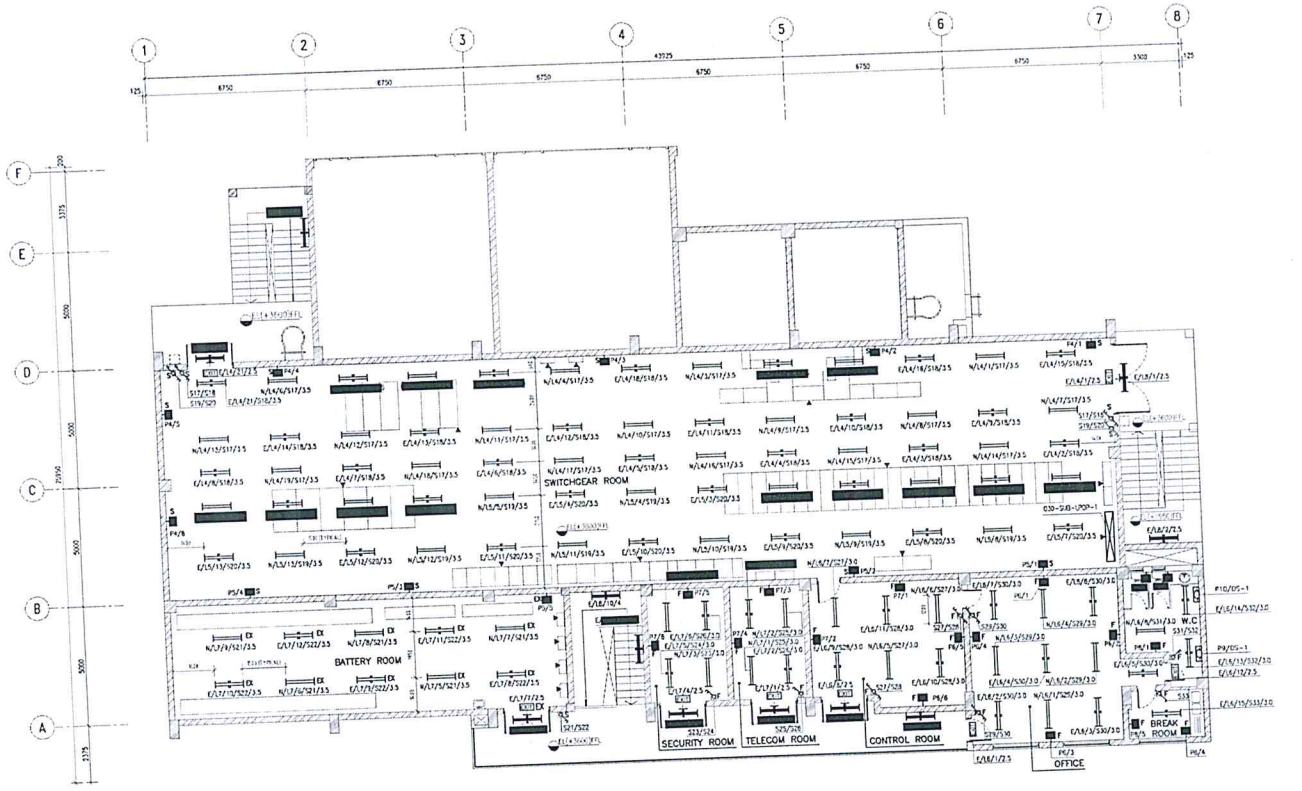
SCALE	ENPPI DRAWING NUMBER	SHEET	REVISION
1:100	01251-100-030-ELB-001	1 OF 3	2



FIRST FLOOR PLAN
(AT EL. +3600)

REFERENCE DRAWING AND DOCUMENTS

01251-100-000-EDB-001	ELECTRICAL DESIGN BASIS
01251-100-030-CBD-221	SUBSTATION AND CONTROL ROOM CELLAR FLOOR PLAN
01251-100-030-CBD-222	SUBSTATION AND CONTROL ROOM FIRST FLOOR PLAN
01251-100-030-CBD-226	SUBSTATION AND CONTROL ROOM ROOF PLAN
01251-100-030-EEB-001	AGROOD AREA (MODULE-1) SUBSTATION EQUIPMENT LAYOUT
01251-100-030-EPS-001	AGROOD AREA (MODULE-1) SUBSTATION LIGHTING AND POWER DISTRIBUTION PANEL SCHEDULE

LEGEND

* FOR LEGEND REFER TO DWG. NO. 01251-100-030-ELB-001 SHEET 1 OF 3.

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. ALL NORMAL AND EMERGENCY LIGHTING FIXTURES SHALL BE FED FROM INDOOR LIGHTING AND SMALL POWER DISTRIBUTION PANEL TAGGED (030-SUB-LPDP-1).
3. CONVENIENCE RECEPTACLES SHALL BE FED FROM INDOOR LIGHTING AND SMALL POWER DISTRIBUTION PANEL TAGGED (030-SUB-LPDP-1).
4. BUILDING OUTDOOR LIGHTING FIXTURES ARE CONTROLLED VIA PHOTOCELL (030-SUB-PC-1) THAT SHALL BE INSTALLED ON BUILDING ROOF AND CONNECTED TO SUBSTATION LIGHTING AND SMALL POWER DISTRIBUTION PANEL.
5. LIGHTING SWITCHES & CONVENIENCE RECEPTACLES SHALL BE:
   - SURFACE MOUNTED FOR CELLAR, TRANSFORMER BAY/ROOM, SWITCHGEAR ROOM, BATTERY ROOM, FIREFIGHTING ROOM, HVAC ROOM OR OUTSIDE THE BUILDING.
   - FLUSH MOUNTED FOR OFFICE, CONTROL ROOM, TELECOM ROOM, SECURITY ROOM, BREAK ROOM AND WC.
6. ALL LIGHTING SWITCHES SHALL BE INSTALLED AT HEIGHT 1.3 METERS.
7. ALL INDOOR CONVENIENCE RECEPTACLES SHALL BE INSTALLED AT HEIGHT:
   - 0.5 METERS IN SWITCHGEAR ROOM, OFFICE, CONTROL ROOM, TELECOM ROOM, SECURITY ROOM & HVAC ROOM.
   - 1.2 METERS IN CELLAR, TRANSFORMER BAY/ROOM, BATTERY ROOM, FIREFIGHTING ROOM, BREAK ROOM AND WC.
8. TRANSFORMER BAY BUILDING AND CONVENIENCE RECEPTACLES SHALL BE MOUNTED AT 1.2 METERS FROM GROUND LEVEL.
9. SURFACE MOUNTED LIGHTING AND/OR RECEPTACLES CIRCUITS SHALL RUN INSIDE CHANNELS AND/OR SEPARATE GALVANIZED STEEL CONDUITS (1" AS MIN.) FIXED ON WALLS AND CEILING AS APPLICABLE.
10. FLUSH MOUNTED LIGHTING AND/OR RECEPTACLES CIRCUITS SHALL RUN INSIDE CHANNELS AND/OR SEPARATE HEAVY DUTY PVC CONDUITS (1" AS MIN) CONCEALED IN CEILING AND WALLS AS APPLICABLE.
11. THE WIRES LAID IN SAME CONDUIT SHALL NOT BE MORE THAN 0.4 TIMES THE TOTAL INNER AREA OF THE CONDUIT.
12. ALL CABLES/WIRES FOR LIGHTING AND RECEPTACLES SHALL BE STRANDED COPPER CONDUCTOR, PVC INSULATED.
13. CABLES/WIRES SHALL BE LAID IN SINGLE LENGTH, SPLICES ARE NOT PERMITTED.
14. CABLES/WIRES SIZES SHALL BE AS FOLLOWS:
    - 14.1. FOR ALL ROOMS EXCEPT BATTERY ROOM:
      - NORMAL LIGHTING WIRING SHALL BE X(2.5sq.mm) FOR MAIN CIRCUIT AND X(2.5sq.mm) FOR BRANCH CIRCUITS.
      - EMERGENCY LIGHTING (WITH BUILT IN BATTERIES) WIRING SHALL BE X(2.5sq.mm) FOR MAIN CIRCUIT AND X(2.5sq.mm) FOR BRANCH CIRCUITS.
      - EXIT LIGHTING WIRING SHALL BE X(2.5sq.mm).
      - CONVENIENCE RECEPTACLES WIRING SHALL BE X(2.5sq.mm).
    - 14.2. FOR BATTERY ROOM:
      - NORMAL LIGHTING CABLING SHALL BE (2.5sq.mm).
      - EMERGENCY & EXIT LIGHTING (WITH BUILT IN BATTERIES) CABLING SHALL BE (2.5sq.mm).
15. CABLE CORES/WIRES COLOR CODING SHALL BE RED FOR PHASE-R, YELLOW FOR PHASE-S, BLUE FOR PHASE-T, BLACK FOR NEUTRAL AND YELLOW/GREEN FOR EARTHING CONDUCTOR. PILOT WIRE SHALL FOLLOW THE SAME COLOR OF RELEVANT PHASE.
16. ALL UNUSED OPENINGS OF FIXTURES, BOXES, AND RECEPTACLES SHALL BE PLUGGED WITH STOPPING PLUGS APPROVED FOR THE PROTECTION DEGREE OF AREAS THEY SERVE.
17. LIGHTING FIXTURES AND RECEPTACLES SHALL BE EARTHED BY INSULATED EARTHING CONDUCTOR ROUTED WITH THE CIRCUIT CONDUCTORS.
18. CONSTRUCTION CONTRACTOR SCOPE OF SUPPLY SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING:
    - 18.1. WIRING SYSTEM (CONDUITS, PULLING JUNCTION BOXES, WIRES, CABLES, MF CABLE GLANDS, TERMINATIONS, CABLE TRAYS/CHANNELS, ..ETC).
    - 18.2. THE FOLLOWING ELECTRICAL CONSUMABLE MATERIALS:
      - STAINLESS STEEL LABELS OF ALL LIGHTING FIXTURES & RECEPTACLES.
      - STAINLESS STEEL CABLE MARKERS.
      - WIRES MARKERS.
      - ULTRAVIOLET RESIST CABLES TIES.
      - PIN TERMINAL LUGS FOR LIGHTING CABLES.
      - TINNED COPPER COMPRESSION TERMINAL LUGS FOR POWER CABLES.
      - STAINLESS STEEL BOLTS/U-BOLTS/WASHERS/NUTS.
      - HOT STEEL SUPPORTS FOR FIXATION OF LIGHTING FIXTURES, RECEPTACLES, ..ETC.
      - HOT CLAMPS FOR STEEL CONDUITS.
      - HOT THREADED RODS.
      - SEALING FOAM.
      - RUBBER BUSHING FOR WIRING ENTRY TO LIGHTING FIXTURE.
19. INSTALLATION OF INDOOR LIGHTING FIXTURES SHALL FOLLOW THE TYPICAL DETAILS SHOWN IN SHEET 3 OF 3.
20. ALL INDOOR LIGHTING SWITCHES AND CONVENIENCE SOCKETS SHALL BE IP55 AS PER MATERIAL INGRESS PROTECTION PROVIDED BY INDOOR ELECTRICAL BULK MATERIALS SUPPLIER.

IDENTIFICATION

* FOR IDENTIFICATION REFER TO DWG. NO. 01251-100-030-ELB-001 SHEET 3 OF 3.

REV	DATE	DESCRIPTION	BY	CHECKED	DESIGNED	APPROVED
2	27.08.20	RE-ISSUED FOR CONSTRUCTION	R.M	SH.A	A.N	M.A
1	05.02.20	ISSUED FOR CONSTRUCTION	T.D	SH.A	A.N	M.A
0	01.12.19	ISSUED FOR DESIGN	M.M.A	SH.A	Y.A	M.A

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FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC) لاجل العيئة العامة المصرية للبترول

الموقع : مجرود

AT : AGROOD

EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
SUBSTATION LIGHTING AND POWER LAYOUT

الشركة الهندسية للصناعات البترولية والكيماوية
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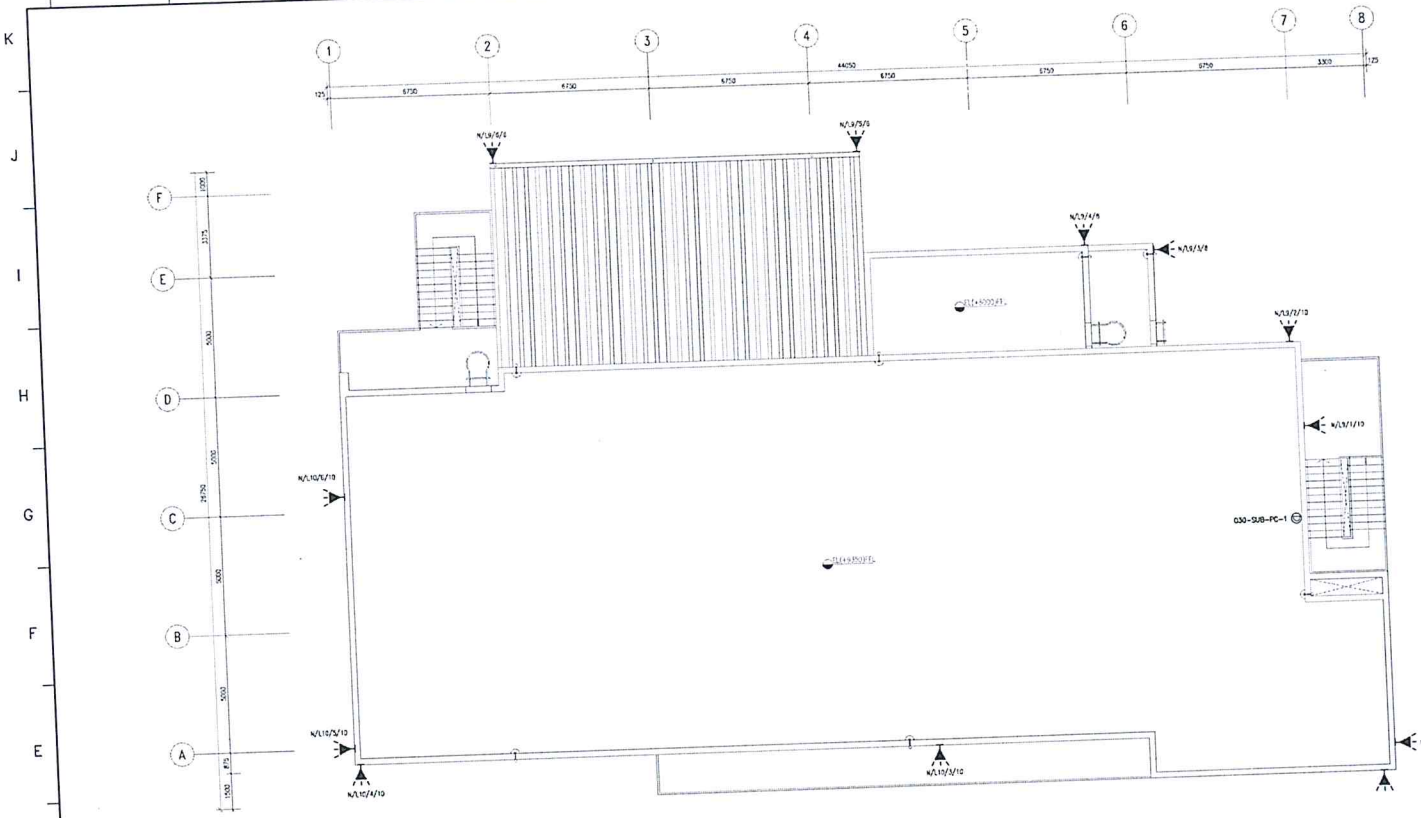
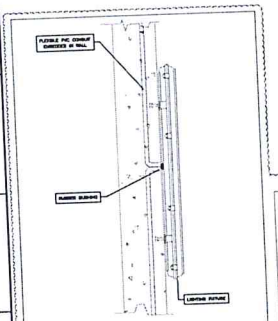
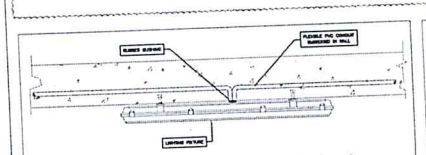
SCALE	ENPPI DRAWING NUMBER	SHEET	REVISION
1:100	01251-100-030-ELB-001	2 OF 3	2

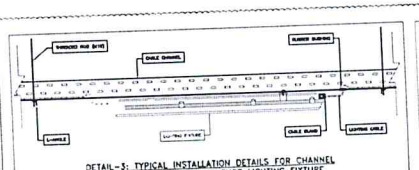




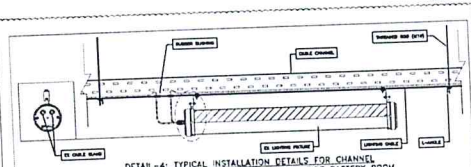
DETAIL-1: TYPICAL INSTALLATION DETAILS FOR CONCRETE BEAM MOUNTED VERTICAL LED TUBE LIGHTING FIXTURE



DETAIL-2: TYPICAL INSTALLATION DETAILS FOR WALL/CEILING MOUNTED HORIZONTAL LED TUBE LIGHTING FIXTURE



DETAIL-3: TYPICAL INSTALLATION DETAILS FOR CHANNEL MOUNTED HORIZONTAL LED TUBE LIGHTING FIXTURE



DETAIL-4: TYPICAL INSTALLATION DETAILS FOR CHANNEL MOUNTED EX LED TUBE LIGHTING FIXTURE INSIDE BATTERY ROOM

SCALE 1:100 — 1m 5m 10m — METERS

REFERENCE DRAWING AND DOCUMENTS

01251-100-000-EDB-001	ELECTRICAL DESIGN BASIS
01251-100-030-CBD-221	SUBSTATION AND CONTROL ROOM CELLAR FLOOR PLAN
01251-100-030-CBD-222	SUBSTATION AND CONTROL ROOM FIRST FLOOR PLAN
01251-100-030-CBD-226	SUBSTATION AND CONTROL ROOM ROOF PLAN
01251-100-030-EEB-001	AGROOD AREA (MODULE-1) SUBSTATION EQUIPMENT LAYOUT
01251-100-030-EPS-001	AGROOD AREA (MODULE-1) SUBSTATION LIGHTING AND POWER DISTRIBUTION PANEL SCHEDULE

LEGEND

* FOR LEGEND REFER TO DWG. NO. 01251-100-030-ELB-001 SHEET 1 OF 3.

NOTES

* FOR NOTES REFER TO DWG. NO. 01251-100-030-ELB-001 SHEET 2 OF 3.

IDENTIFICATIONS

INDOOR LIGHTING FIXTURES TO BE IDENTIFIED AS FOLLOWS :

N(I) / LX / X / SX / X

- MOUNTING HEIGHT FROM FINISHED FLOOR LEVEL TO CENTER OF FIXTURE
- SWITCH SERIAL NO. (IF SWITCH NO. IS NOT MENTIONED SO SWITCHING IS DIRECT FROM THE PANEL)
- FIXTURE SERIAL NO. PER CIRCUIT
- CIRCUIT SERIAL NO.
- NORMAL OR (EMERGENCY) LIGHTING CIRCUIT

RECEPTACLES TO BE IDENTIFIED AS FOLLOWS :

PX (W) / X

- RECEPTACLE SERIAL NO. PER CIRCUIT
- CONVENIENCE OR (WELDING) RECEPTACLE CIRCUIT SERIAL NO.

OUTDOOR LIGHTING & EXIT FIXTURES TO BE IDENTIFIED AS FOLLOWS :

N(I) / LX / X / X / X

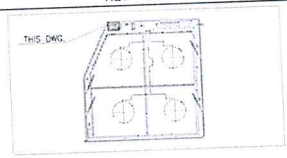
- MOUNTING HEIGHT FROM GRADE LEVEL (+0.00) FOR OUTDOOR LIGHTING AND FROM FINISHED FLOOR LEVEL FOR EXIT LIGHTING (MOUNTING HEIGHT IS MEASURED FROM LIGHTING FIXTURE CENTER)
- FIXTURE SERIAL NO. PER CIRCUIT
- CIRCUIT SERIAL NO.
- NORMAL OR (EMERGENCY) LIGHTING CIRCUIT

DISCONNECTOR SWITCH TO BE IDENTIFIED AS FOLLOWS :

PX / DS-X

- DISCONNECTOR SWITCH SERIAL NO. PER CIRCUIT
- POWER CIRCUIT SERIAL NO.

KEY PLAN



REV	DATE	DESCRIPTION	BY	CHECKED	DESIGNED	APPROVED
2	27 03 20	RE-ISSUED FOR CONSTRUCTION	R.M	SH.A	A.N	M.A
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0	01 12 19	ISSUED FOR DESIGN	M.M.A	SH.A	Y.A	M.A

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FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC)
لاجل العيئة العامة المصرية للبترول

AT : AGROOD
الموقع : عجرود

EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE-1) SUBSTATION LIGHTING AND POWER LAYOUT

الشركة الهندسية للصناعات البترولية والكيماوية
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SCALE	ENPPI DRAWING NUMBER	SHEET	REVISION
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AGROOD AREA (MODULE-1) SUBSTATION LIGHTING AND POWER DISTRIBUTION PANEL (030-SUB-LPDP-1) SCHEDULE

REFERENCES

DOCUMENT NUMBER	DESCRIPTION
01251-100-000-EDB-001	PROJECT DESIGN BASIS
01251-100-030-EES-001	AGROOD AREA (MODULE-1)- ELECTRICAL LOW VOLTAGE SWITCHGEAR SCHEDULE (030-SUB-LVSWG-1)
01251-100-030-ECS-001	AGROOD AREA (MODULE-1)- ELECTRICAL CABLES SCHEDULE
01251-100-030-ELB-001	AGROOD AREA (MODULE-1)- SUBSTATION LIGHTING AND SMALL POWER LAYOUT

REV	DATE	DESCRIPTION	BY	CHECKED	DESIGNED	APPROVED
1	14 05 20	ISSUED FOR CONSTRUCTION	T.O	SH.A	A.H	M.A
0	03 12 19	ISSUED FOR DESIGN	M.M.A	SH.A	Y.A	M.A

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AT : RAS SHUKEIR الموقع رأس شقير

EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
SUBSTATION LIGHTING & POWER DISTRIBUTION PANEL
COVER PAGE

الشركة الهندسية للصناعات البترولية والكيماوية
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2	INDEX, NOTES AND LEGEND	1
3	SUBSTATION LIGHTING & POWER DISTRIBUTION PANEL SCHEDULE	1
4	SUBSTATION LIGHTING & POWER DISTRIBUTION PANEL SCHEDULE	1
5	SUBSTATION LIGHTING & POWER DISTRIBUTION PANEL SCHEDULE	1

NOTES

1. PANEL SHALL BE EQUIPPED WITH 3 LED INDICATIONS FOR VOLTAGE PRESENCE.
2. ALL INCOMING AND OUTGOING CIRCUIT BREAKERS SHALL BE PROVIDED WITH ON/OFF/FAULT LED INDICATION LAMPS WITH COLORS RED/GREEN/YELLOW RESPECTIVELY.
3. PANEL SHALL BE EQUIPPED WITH LAMP TEST PUSH BUTTON FOR ALL LED INDICATIONS LAMPS.
4. PANEL SHALL BE FREE STAND (GROUND MOUNTED).
5. PANEL SHALL BE BOTTOM ENTRY.
6. PANEL DEGREE OF INGRESS PROTECTION SHALL BE IP41 AS MINIMUM.
7. PANEL FINISH COLOR SHALL BR RAL-7035.

LEGEND

- MOULDED CASE CIRCUIT BREAKER (MCCB)
- MINIATURE CIRCUIT BREAKER (MCB)
- CONTACTOR
- EARTH LEAKAGE PROTECTION THROUGH RESIDUAL CURRENT CIRCUIT BREAKER (RCCB) – (100mA)
- THERMAL & MAGNETIC PROTECTION
- DIGITAL MULTIMETER
- PHOTOCELL
- FUSE
- SELECTOR SWITCH (MANUAL–OFF–AUTO)
- CURRENT TRANSFORMER
- INDICATION LAMP (R: RED, G: GREEN, Y: YELLOW)
- CONTACTOR CLOSE PUSH BUTTON (GREEN COLOR)
- CONTACTOR OPEN PUSH BUTTON (RED COLOR)
- LAMP TEST PUSH BUTTON
- LINE AND NEUTRAL
- 3PHASE
- 3PHASE AND NEUTRAL
- 3PHASE AND REDUCED NEUTRAL
- POTENTIAL EARTH (PE)

EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
SUBSTATION LIGHTING & POWER DISTRIBUTION PANEL
INDEX, NOTES AND LEGEND

الشركة الهندسية للصناعات البترولية والكيماوية
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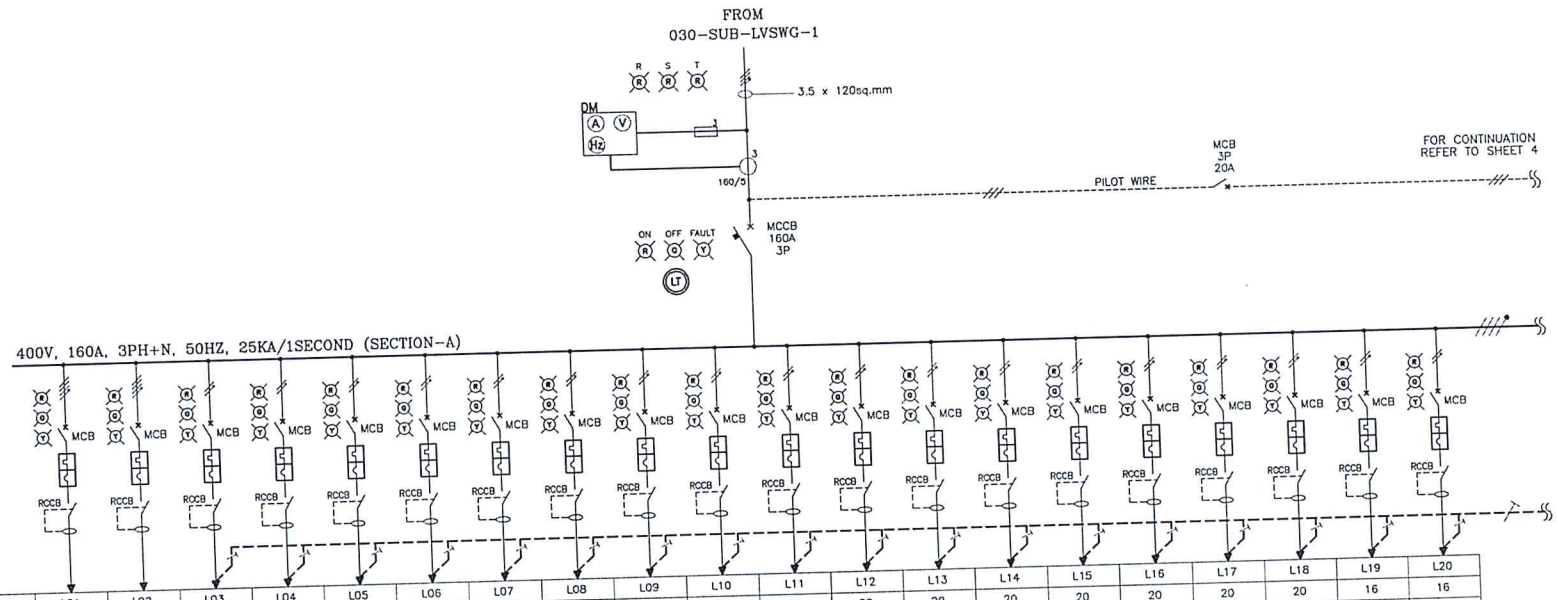
ENGINEERING FOR THE PETROLEUM AND PROCESS AREA INDUSTRIES

SCALE	DOCUMENT NUMBER	SHEET	REVISION
NTS	01251-100-030-EPS-001	02/05	1



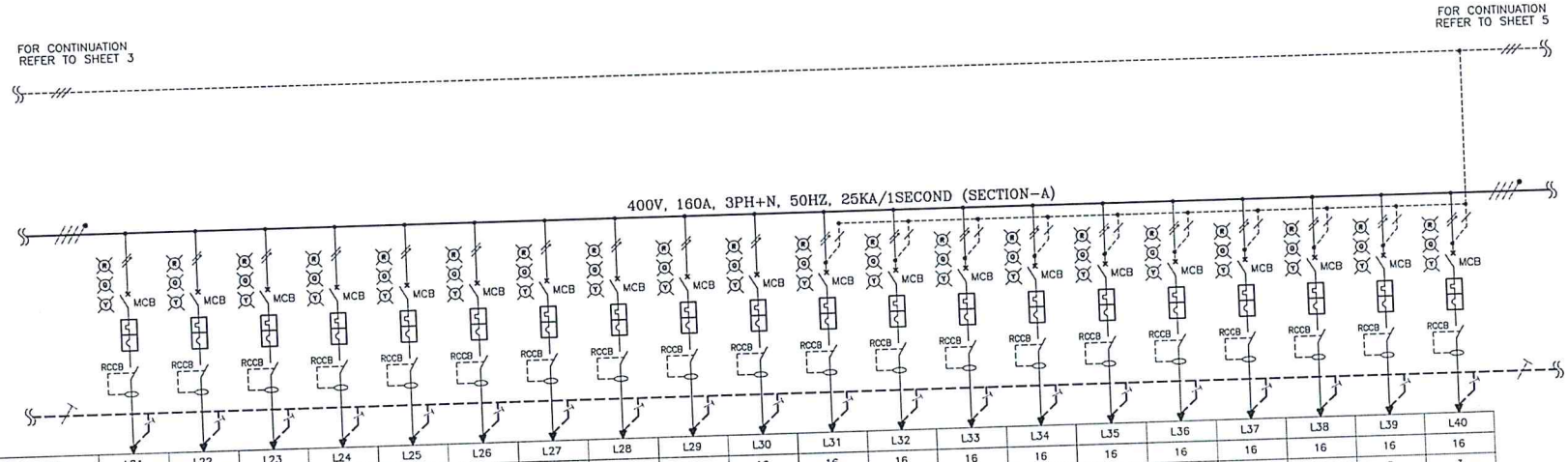
CIRCUIT NUMBER	L01	L02	L03	L04	L05	L06	L07	L08	L09	L10	L11	L12	L13	L14	L15	L16	L17	L18	L19	L20
CIRCUIT BREAKER RATING (A)	63	63	32	32	32	20	20	20	20	20	20	20	20	20	20	20	20	20	16	16
NO. OF POLES	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PHASE IDENTIFICATION	RST	RST	R	S	T	R	S	T	R	S	T	R	S	T	R	S	T	R	S	T
ABSORBED POWER (kW)	35*	35*	2.5*	2.5*	2.5*	3*	3*	3*	3*	3*	3*	3*	3*	–	–	–	–	–	0.82	1.11
CABLE SIZE	4x16	4x16	3x(1x10)	3x(1x10)	3x(1x10)	3x(1x6)	3x(1x6)	3x(1x6)	3x(1x6)	3x(1x6)	3x(1x6)	3x(1x6)	3x(1x6)	3x(1x6)	3x(1x6)	3x(1x6)	3x(1x6)	3x(1x6)	3x(1x4)	3x(1x4)
DESCRIPTION	TRANSFORMER BAY WELDING SOCKET	SPARE	WC WATER HEATER	WC HAND DRYER	SPARE	CONVENIENCE SOCKETS CIRCUIT NO.P1 (CELLAR FLOOR)	CONVENIENCE SOCKETS CIRCUIT NO.P2 (CELLAR FLOOR)	CONVENIENCE SOCKETS CIRCUIT NO.P3 (CELLAR FLOOR)	CONVENIENCE SOCKETS CIRCUIT NO.P4 (FIRST FLOOR)	CONVENIENCE SOCKETS CIRCUIT NO.P5 (FIRST FLOOR)	CONVENIENCE SOCKETS CIRCUIT NO.P6 (FIRST FLOOR)	CONVENIENCE SOCKETS CIRCUIT NO.P7 (FIRST FLOOR)	CONVENIENCE SOCKETS CIRCUIT NO.P8 (FIRST FLOOR)	SPARE	SPARE	SPARE	SPARE	SPARE	INDOOR NORMAL LIGHTING CIRCUIT No.1 (N/L1) (CELLAR FLOOR)	INDOOR NORMAL LIGHTING CIRCUIT No.2 (N/L2) (CELLAR FLOOR)

* MAXIMUM ABSORBED POWER AT 0.8 POWER FACTOR

EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
SUBSTATION LIGHTING & POWER DISTRIBUTION PANEL SCHEDULE

الشركة الهندسية للصناعات البترولية والكيماوية
Enppi إنبي
ENGINEERING FOR THE PETROLEUM AND PROCESS AREA INDUSTRIES

SCALE	DOCUMENT NUMBER	SHEET	REVISION
NTS	01251-100-030-EPS-001	03/05	1

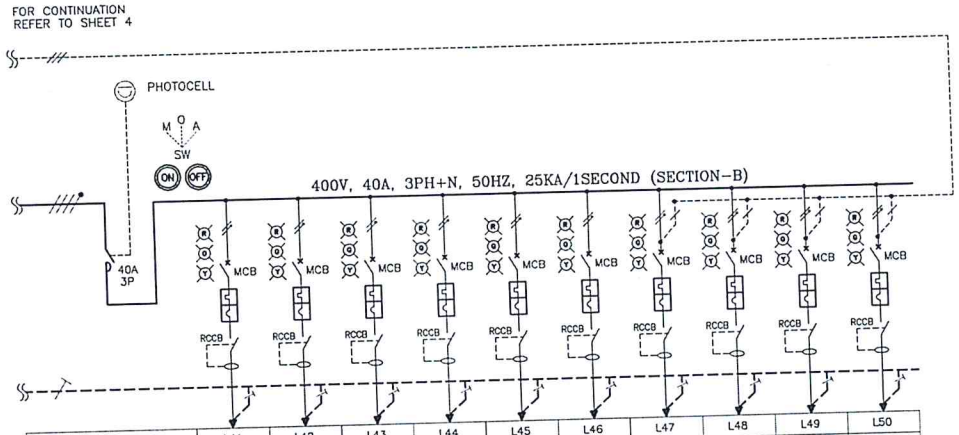


CIRCUIT NUMBER	L21	L22	L23	L24	L25	L26	L27	L28	L29	L30	L31	L32	L33	L34	L35	L36	L37	L38	L39	L40
CIRCUIT BREAKER RATING (A)	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
NO. OF POLES	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3
PHASE IDENTIFICATION	R	S	T	R	S	S	T	R	S	T	R	S	T	R	S	T	R	S	T	R
ABSORBED POWER (kW)	0.7	1.22	0.83	0.51	0.51	–	–	–	–	–	0.71	0.65	0.71	1.29	0.83	0.78	0.59	–	–	
CABLE SIZE	3x(1x4)	3x(1x4)	3x(1x4)	3x(1x4)	3x(1x4)	3x(1x4)	3x(1x4)	3x(1x4)	3x(1x4)	3x(1x4)	4x(1x4)	4x(1x4)	4x(1x4)	4x(1x4)	4x(1x4)	4x(1x4)	4x(1x4)	4x(1x4)	4x(1x4)	4x(1x4)
DESCRIPTION	INDOOR NORMAL LIGHTING CIRCUIT No.3 (N/L3) (CELLAR FLOOR)	INDOOR NORMAL LIGHTING CIRCUIT No.4 (N/L4) (FIRST FLOOR)	INDOOR NORMAL LIGHTING CIRCUIT No.5 (N/L5) (FIRST FLOOR)	INDOOR NORMAL LIGHTING CIRCUIT No.6 (N/L6) (FIRST FLOOR)	INDOOR NORMAL LIGHTING CIRCUIT No.7 (N/L7) (FIRST FLOOR)	SPARE	SPARE	SPARE	SPARE	SPARE	INDOOR EMERGENCY LIGHTING CIRCUIT No.1 (E/L1) (CELLAR FLOOR)	INDOOR EMERGENCY LIGHTING CIRCUIT No.2 (E/L2) (CELLAR FLOOR)	INDOOR EMERGENCY LIGHTING CIRCUIT No.3 (E/L3) (CELLAR FLOOR)	INDOOR EMERGENCY LIGHTING CIRCUIT No.4 (E/L4) (FIRST FLOOR)	INDOOR EMERGENCY LIGHTING CIRCUIT No.5 (E/L5) (FIRST FLOOR)	INDOOR EMERGENCY LIGHTING CIRCUIT No.6 (E/L6) (FIRST FLOOR)	INDOOR EMERGENCY LIGHTING CIRCUIT No.7 (E/L7) (FIRST FLOOR)	SPARE	SPARE	SPARE

EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
SUBSTATION LIGHTING & POWER DISTRIBUTION PANEL
SCHEDULE

الشركة الهندسية للصناعات البترولية والكيماوية
Enppi إنبي
ENGINEERING FOR THE PETROLEUM AND PROCESS AREA INDUSTRIES

SCALE	DOCUMENT NUMBER	SHEET	REVISION
NTS	01251-100-030-EPS-001	04/05	1



CIRCUIT NUMBER	L41	L42	L43	L44	L45	L46	L47	L48	L49	L50
CIRCUIT BREAKER RATING (A)	16	16	16	16	16	16	16	16	16	16
NO. OF POLES	2	2	2	2	2	2	3	3	3	3
PHASE IDENTIFICATION	R	S	T	R	S	T	R	S	T	R
ABSORBED POWER (kW)	0.36	0.96	0.96	–	–	–	0.96	0.26	–	–
CABLE SIZE	3x(1x4)	3x(1x4)	3x(1x4)	3x(1x4)	3x(1x4)	3x(1x4)	4x(1x4)	4x(1x4)	4x(1x4)	4x(1x4)
DESCRIPTION	OUTDOOR NORMAL LIGHTING CIRCUIT No.1 (N/L8)	OUTDOOR NORMAL LIGHTING CIRCUIT No.2 (N/L9)	OUTDOOR NORMAL LIGHTING CIRCUIT No.3 (N/L10)	SPARE	SPARE	SPARE	OUTDOOR EMERGENCY LIGHTING CIRCUIT No.1 (E/L8)	OUTDOOR EMERGENCY LIGHTING CIRCUIT No.2 (E/L9)	SPARE	SPARE

EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
SUBSTATION LIGHTING & POWER DISTRIBUTION PANEL SCHEDULE

الشركة الهندسية للصناعات البترولية والكيماوية
Enppi إنبي
ENGINEERING FOR THE PETROLEUM AND PROCESS AREA INDUSTRIES

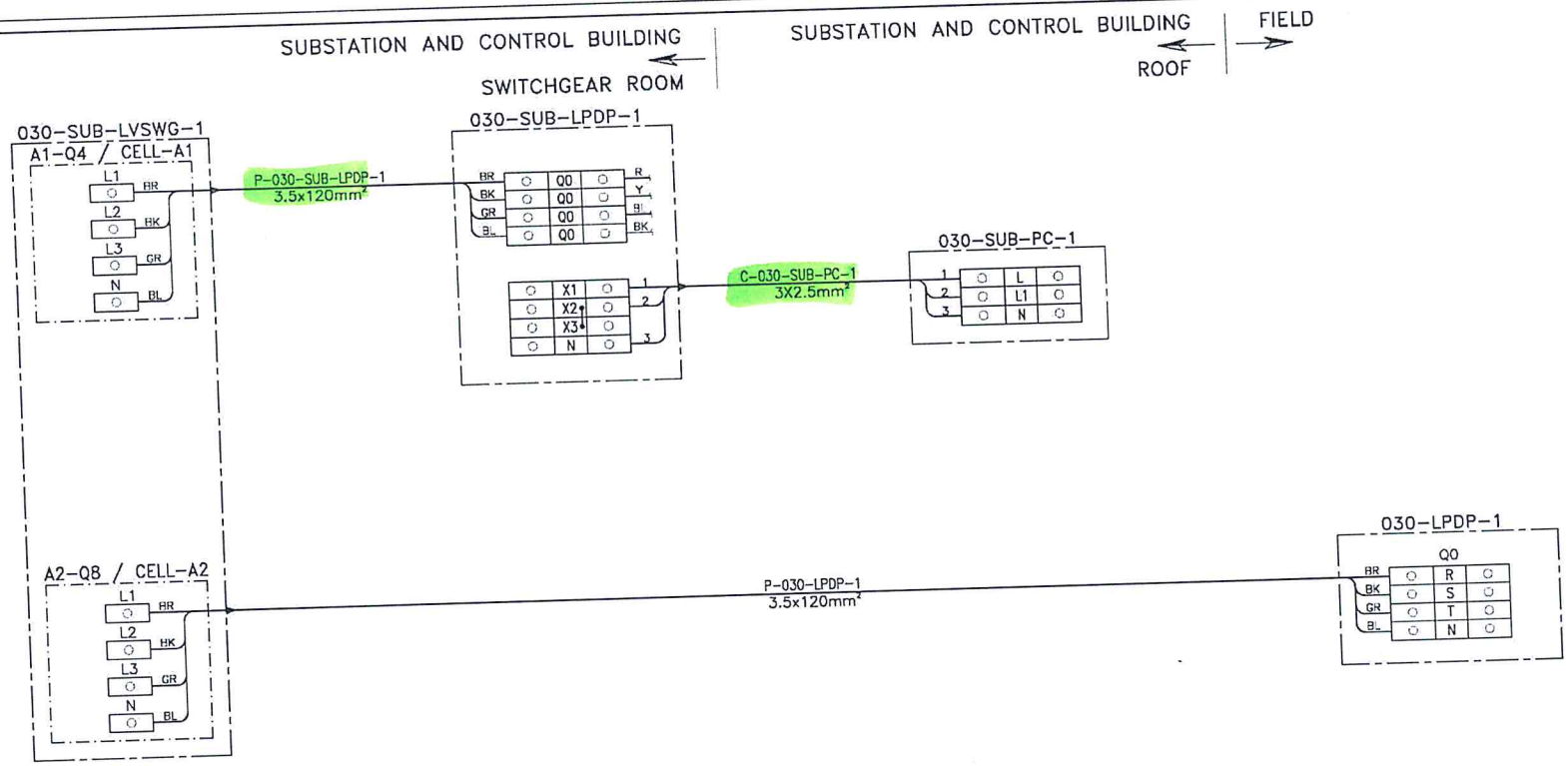
SCALE	DOCUMENT NUMBER	SHEET	REVISION
NTS	01251-100-030-EPS-001	05/05	1

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

12.03- Motor Datasheets

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

12.04- Electrical Cables Schedule



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EGPC
THE EGYPTIAN GENERAL PETROLEUM CO.
EGPC
الهيئة العامة المصرية للبترول

FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC) لاجل الهيئة العامة المصرية للبترول

AT : AGROOD الموقع :عجرود السويس

EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
ELECTRICAL INTERCONNECTION & WIRING DIAGRAM
LIGHTING & POWER DISTRIBUTION PANEL
(030-SUB-LPDP-1 & 030-LPDP-1)

الشركه الهندسية للصناعات البترولية والكيماوية
Enppi إنبي
ENGINEERING FOR THE PETROLEUM AND PROCESS INDUSTRIES

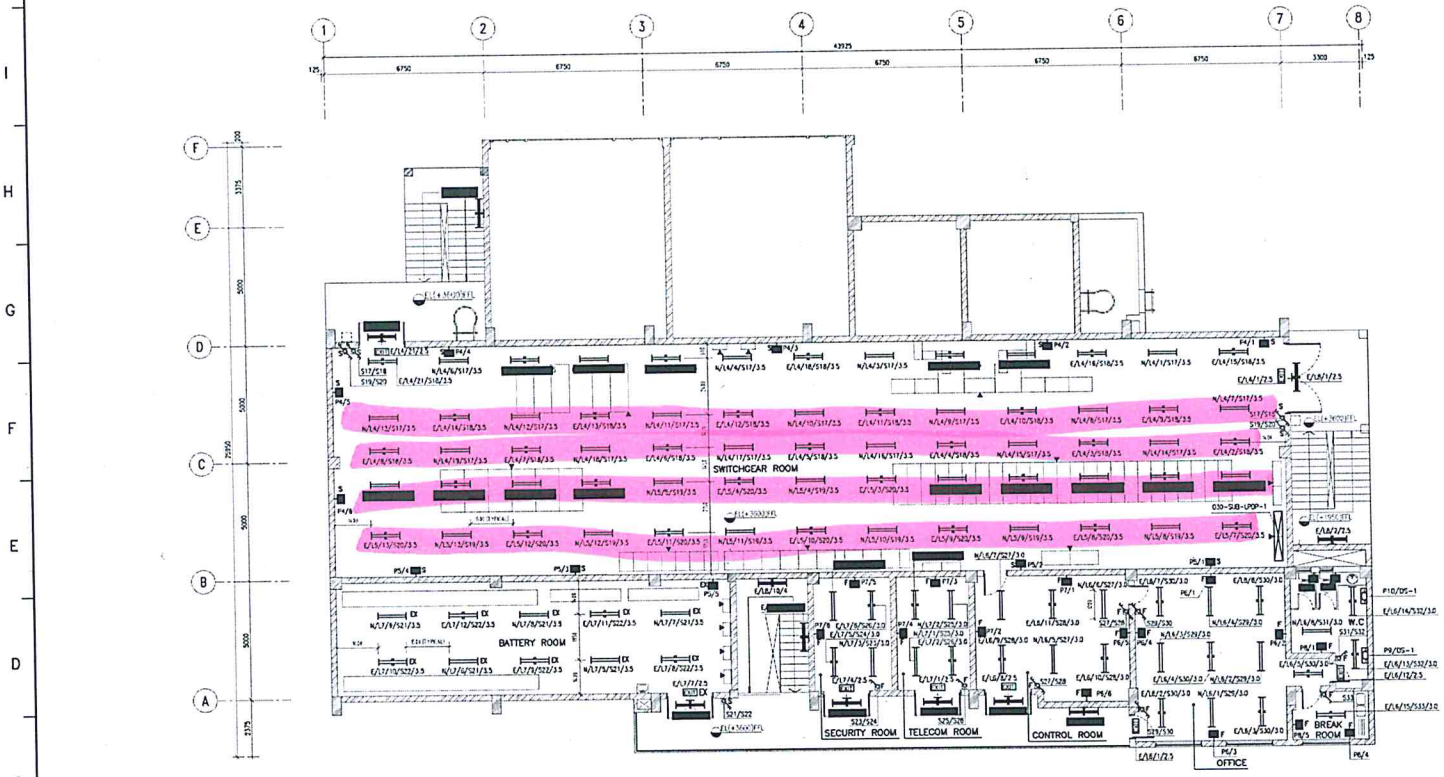
SCALE	DOCUMENT NUMBER	SHEET	REVISION
NONE	01251-100-030-EWI-001	022 OF 078	0

A3 SIZE: 297 X 420

PAGE	Cable Mark	GL1	FROM	TO	GL2	CABLEService	Service Voltage	KW	Size	Type	L
20	P-030-SUB-LPDP-1	WP	030-SUB-LVSWG-1 (A1-Q4)	030-SUB-LPDP-1	WP	3PH POWER FEEDER	400VAC	50	3.5x120	4B	30
20	C-030-SUB-PC-1	WP	030-SUB-LPDP-1	030-SUB-PC-1	EX	PHOTO CELL			3x2.5	C1	30

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

12.05- Electrical Cables Laying Certificates



FIRST FLOOR PLAN
(AT EL. +3600)

REFERENCE DRAWING AND DOCUMENTS

01251-100-000-EDB-001	ELECTRICAL DESIGN BASIS
01251-100-030-CBD-221	SUBSTATION AND CONTROL ROOM CELLAR FLOOR PLAN
01251-100-030-CBD-222	SUBSTATION AND CONTROL ROOM FIRST FLOOR PLAN
01251-100-030-CBD-226	SUBSTATION AND CONTROL ROOM ROOF PLAN
01251-100-030-ELB-001	AGROOD AREA (MODULE-1) SUBSTATION EQUIPMENT LAYOUT
01251-100-030-EPS-001	AGROOD AREA (MODULE-1) SUBSTATION LIGHTING AND POWER DISTRIBUTION PANEL SCHEDULE

LEGEND

* FOR LEGEND REFER TO DWG. NO. 01251-100-030-ELB-001 SHEET 1 OF 3.

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOCKED.
2. ALL NORMAL AND EMERGENCY LIGHTING FIXTURES SHALL BE FED FROM INDOOR LIGHTING AND SMALL POWER DISTRIBUTION PANEL TAGGED (030-SUB-LPDP-1).
3. CONVENIENCE RECEPTACLES SHALL BE FED FROM INDOOR LIGHTING AND SMALL POWER DISTRIBUTION PANEL TAGGED (030-SUB-LPDP-1).
4. BUILDING OUTDOOR LIGHTING FIXTURES ARE CONTROLLED VIA PHOTOCELL (030-SUB-PC-1) THAT SHALL BE INSTALLED ON BUILDING ROOF AND CONNECTED TO SUBSTATION LIGHTING AND SMALL POWER DISTRIBUTION PANEL.
5. LIGHTING SWITCHES & CONVENIENCE RECEPTACLES SHALL BE:
   - SURFACE MOUNTED FOR CELLAR, TRANSFORMER BAY/ROOM, SWITCHGEAR ROOM, BATTERY ROOM, FIREFIGHTING ROOM, HVAC ROOM OR OUTSIDE THE BUILDING.
   - FLUSH MOUNTED FOR OFFICE, CONTROL ROOM, TELECOM ROOM, SECURITY ROOM, BREAK ROOM AND WC.
6. ALL LIGHTING SWITCHES SHALL BE INSTALLED AT HEIGHT 1.2 METERS.
7. ALL INDOOR CONVENIENCE RECEPTACLES SHALL BE INSTALLED AT HEIGHT:
   - 0.3 METERS IN SWITCHGEAR ROOM, OFFICE, CONTROL ROOM, TELECOM ROOM, SECURITY ROOM & HVAC ROOM.
   - 1.2 METERS IN CELLAR, TRANSFORMER BAY/ROOM, BATTERY ROOM, FIREFIGHTING ROOM, BREAK ROOM AND WC.
8. TRANSFORMER BAY WELDING AND CONVENIENCE RECEPTACLES SHALL BE MOUNTED AT 1.2 METERS FROM GROUND LEVEL.
9. SURFACE MOUNTED LIGHTING AND/OR RECEPTACLES CIRCUITS SHALL RUN INSIDE CHANNELS AND/OR SEPARATE GALVANIZED STEEL CONDUITS (1" AS MIN.) FIXED ON WALLS AND CEILING AS APPLICABLE.
10. FLUSH MOUNTED LIGHTING AND/OR RECEPTACLES CIRCUITS SHALL RUN INSIDE CHANNELS AND/OR SEPARATE HEAVY DUTY PVC CONDUITS (1" AS MIN.) CONCEALED IN CEILING AND WALLS AS APPLICABLE.
11. THE WIRES LAID IN SAME CONDUIT SHALL NOT BE MORE THAN 0.4 TIMES THE TOTAL INNER AREA OF THE CONDUIT.
12. ALL CABLES/WIRES FOR LIGHTING AND RECEPTACLES SHALL BE STRANDED COPPER CONDUCTOR, PVC INSULATED.
13. CABLES/WIRES SHALL BE LAID IN SINGLE LENGTH, SPLICES ARE NOT PERMITTED.
14. CABLES/WIRES SIZES SHALL BE AS FOLLOWS:
    14.1. FOR ALL ROOMS EXCEPT BATTERY ROOM
    - NORMAL LIGHTING WIRING SHALL BE 2(2.5sq.mm) FOR MAIN CIRCUIT AND 2(1.5sq.mm) FOR BRANCH CIRCUITS.
    - EMERGENCY LIGHTING (WITH BUILT IN BATTERIES) WIRING SHALL BE 4(2.5sq.mm) FOR MAIN CIRCUIT AND 4(1.5sq.mm) FOR BRANCH CIRCUITS.
    - EXIT LIGHTING WIRING SHALL BE 2(1.5sq.mm).
    - CONVENIENCE RECEPTACLES WIRING SHALL BE 2(2.5sq.mm).
    14.2. FOR BATTERY ROOM
    - NORMAL LIGHTING CABLING SHALL BE (2X1.5sq.mm).
    - EMERGENCY & EXIT LIGHTING (WITH BUILT IN BATTERIES) CABLING SHALL BE (4X2.5sq.mm).
15. CABLE CORES/WIRES COLOR CODING SHALL BE RED FOR PHASE-R, YELLOW FOR PHASE-S, BLUE FOR PHASE-T, BLACK FOR NEUTRAL AND YELLOW/GREEN FOR EARTHING CONDUCTOR. PILOT WIRE SHALL FOLLOW THE SAME COLOR OF RELEVANT PHASE.
16. ALL UNUSED OPENINGS OF FIXTURES, BOXES, AND RECEPTACLES SHALL BE PLUGGED WITH STOPPING PLUGS APPROVED FOR THE PROTECTION DEGREE OF AREAS WHERE SEMC.
17. LIGHTING FIXTURES AND RECEPTACLES SHALL BE EARTHED BY INSULATED EARTHING CONDUCTOR ROUTED WITH THE CIRCUIT CONDUCTORS.
18. CONSTRUCTION CONTRACTOR SCOPE OF SUPPLY SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING:
    18.1. WIRING SYSTEM (CONDUITS, PULLING JUNCTION BOXES, WIRES, CABLES, MP CABLE GLANDS, TERMINATIONS, CABLE TRAYS/CHANNELS ...ETC.
    18.2. THE FOLLOWING ELECTRICAL CONSUMABLE MATERIALS.
    - STAINLESS STEEL LABELS OF ALL LIGHTING FIXTURES & RECEPTACLES.
    - STAINLESS STEEL CABLE MARKERS.
    - WIRES MARKERS.
    - ULTRAVIOLET RESIST CABLES TIES.
    - PIN TERMINAL LUGS FOR LIGHTING CABLES.
    - TINNED COPPER COMPRESSION TERMINAL LUGS FOR POWER CABLES.
    - STAINLESS STEEL BOLTS/U-BOLTS/WASHERS/NUTS.
    - HOT STEEL SUPPORTS FOR FIXATION OF LIGHTING FIXTURES, RECEPTACLES, ...ETC.
    - HOT CLAMPS FOR STEEL CONDUITS.
    - HOT THREADED RODS.
    - SEALING PUNK.
    - RUBBER BUSHING FOR WIRING ENTRY TO LIGHTING FIXTURE.
19. INSTALLATION OF INDOOR LIGHTING FIXTURES SHALL FOLLOW THE TYPICAL DETAILS SHOWN IN SHEET 3 OF 3.
20. ALL INDOOR LIGHTING SWITCHES AND CONVENIENCE RECEPTS SHALL BE IP55 AS PER MATERIAL INGRESS PROTECTION PROVIDED BY INDOOR ELECTRICAL BULK MATERIALS SUPPLIER.

IDENTIFICATION

* FOR IDENTIFICATION REFER TO DWG. NO. 01251-100-030-ELB-001 SHEET 3 OF 3.

REV	DATE	DESCRIPTION	BY	CHECKED	DESIGNED	APPROVE
2	27.08.20	RE-ISSUED FOR CONSTRUCTION	R.M	SH.A	A.N	M.A
1	14.05.20	ISSUED FOR CONSTRUCTION	T.O	SH.A	A.N	M.A
0	01.12.19	ISSUED FOR DESIGN	M.M.A	SH.A	Y.A	M.A

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EGPC
THE EGYPTIAN GENERAL PETROLEUM CO.
الهيئة العامة المصرية للبترول
EGPC

FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC) لأجل الهيئة العامة المصرية للبترول

AT : AGROOD الموقع : عجرود

EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
SUBSTATION LIGHTING AND POWER LAYOUT

الشركة الهندسية للصناعات البترولية والكيماوية
Enppi إنبي
ENGINEERING FOR THE PETROLEUM AND PROCESS INDUSTRIES

SCALE	ENPPI DRAWING NUMBER	SHEET	REVISION
1:100	01251-100-030-ELB-001	2 OF 3	2

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

12.06- Electrical Cables Testing Certificates

Enppi

EGPC CRUDE OIL TANK FARM

EGPC

INSPECTION AND TEST REPORT FOR

CABLE INSULATION RESISTANCE TEST

SYSTEM NO.:

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	DOUCUMENT No.	DISPLINE	SHEET NO
PTJ-ELE-RFI-		ITR-EL-0006A	ELECTRICAL	

INSTRUMENT TYPE:	SERIAL:	SERVICE VOLTAGE:	TEST VOLTAGE:	AREA / PACKAGE:
HIGH VOLTAGE INSULATION TESTER-SANWA-MG5000	17015900385	400	1000	SUBSTATION

NO	Item/Tag NO.	CABLE SIZE	Continuity Test	PHASE TO PHASE			PHASE TO NUETRAL"M.Ohm"			PHASES & NUETRAL TO ARMOR "M.Ohm"				RESULT	
				BR-BK	BR-GR	BK-GR	BR-B	BK-B	GR-B	BR-ARM	BK-ARM	GR-ARM	B-ARM	Pass	FAIL
17	P-030-SUB-LPDP-1	3.5x120	✓	ol	ol	ol	ol							✓	
18	P-030-SUB-ASP-1	3.5x120	✓	ol	ol	ol	ol							✓	
19	P-030-EPM1-UPDP-1	3.5x50	✓	ol	ol	ol	ol							✓	
20	P1-030-SUB-ACUPS-1	3x10	✓	o			ol							✓	
21	P-030-SUB-IRP-1	3x10	✓				ol							✓	
22	D-030-SUB-LVSWG-1A	3x10	✓				ol							✓	
23	D-030-SUB-LVSWG-1B	3x10	✓				ol							✓	
24	D-030-SUB-IRP-1	3x10	✓				ol							✓	
25	P1-030-SUB-LVSWG-1A	3x10	✓				ol							✓	
26	P1-030-SUB-LVSWG-1B	3x10	✓				ol							✓	
27	C1-030-SUB-ACUPS-1	3x2.5	✓				ol							✓	
28	C2-030-SUB-ACUPS-1	3x2.5	✓				ol							✓	
29	C1-030-SUB-DCUPS-1	3x2.5	✓				ol							✓	
30	C2-030-SUB-DCUPS-1	3x2.5	✓				ol							✓	
31	P-030-SUB-AVR-1A	3x4	✓				ol							✓	
32	P-030-SUB-AVR-1B	3x4	✓				ol							✓	

Remarks :-

Referance :-

	PETROJET	ENPPI	PMC

Enppi	EGPC CRUDE OIL TANK FARM	EGPC

INSPECTION AND TEST REPORT FOR

CABLE INSULATION RESISTANCE TEST

SYSTEM NO.:

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	DOUCUMENT No.	DISPLINE	SHEET NO
RFI- 262		ITR-EL-0006A	ELECTRICAL	

INSTRUMENT TYPE:	SERIAL:	SERVICE VOLTAGE:	TEST VOLTAGE:	AREA / PACKAGE:
		220 v	1kv	

NO	Item/Tag NO.	CABLE SIZE	Continuity Test	PHASE TO PHASE "M.Ohm"			PHASE TO NUETRAL"M.Ohm"			PHASES & NUETRAL TO ARMOR "M.Ohm"				RESULT	
				BR-BK	BR-GR	BK-GR	BR-B	BK-B	GR-B	BR-ARM	BK-ARM	GR-ARM	B-ARM	Pass	FAIL
1	P-030-SUB-ACUPS-1A	3.5x120	✓											✓	
2	P-030-SUB-ACUPS-1B	3.5x120	✓											✓	
3	P-030-SUB-ACUPS-BP	3.5x50	✓											✓	
4	C-030-SUB-PC-1	3x2.5	✓											✓	
5	P-030-Tol-CPTR	3x10	✓											✓	
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															

Remarks :-

Referance :-

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE		® Islam Sherif	
DATE			

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

12.07- Electrical Cables Termination Certificates

Enppi PETROJET	EGPC CRUDE OIL TANK FARM	EGPC

Owner :	Egyptian General Petroleum Corporation (EGPC)	Project No: 01251-100-030 :01251-100-031
Contractor	CONSORTIUM (ENPPI / PETROJET)	Document No: ITR-QC-0001 Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : CABLE TERMINATION AND SPLICING

NOTIFICATION NO. : PTJ-ELEC-RFI- 262 DISCIPLINE : E&I

DATE : : 10/23/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	CABLE TERMINATION AND SPLICING	MODULE 1	23-Oct-21				
1	P-030-SUB-ACUPS-1A						
2	P-030-SUB-ACUPS-1B						
3	P-030-SUB-ACUPS-BP						
4	C-030-SUB-PC-1						
5	P-030-T01-CPTR						
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE		® Islam Sherif	
DATE			

Enppi PETROJET

EGPC CRUDE OIL TANK FARM

EGPC

INSPECTION AND TEST REPORT FOR

CABLE TERMINATION AND SPLICING

SYSTEM NO.:

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
262		ITR-EL-0009	ELEC	1 OF 1

Item/Tag NO.					
Type :-		Core:		Size:	

NO.	Description of check	RESUNT ACCEPT	REJECT	N/A.
1	Check cable glands are correct type and size as per cable schedule.	✓		
2	Check there are no damages to cores, termination chamber layout is satisfactory, core identification is correct, crimped and pins satisfactory.	✓		
3	Check cable tag is done correctly.	✓		
4	Test and confirm conductor, phase continuity.	✓		
5	Check insulation resistance test (megger) is completed *'	✓		
6	Check Hi-pot test is completed, only for MV/HV cables *''			✓
7	Connect all cores at both ends and confirm all connections are correct as per termination diagram.	✓		
8	Confirm spare cores, screens are earthed and conform to design drawings/specifications	✓		
9	Check enclosure cover is installed , no damages and no bolts are missing	✓		
10	Calibration test certificate of testing equipment to be checked.			✓

Remarks :

	PETROJET	ENPPI	PMC
NAME :		Islam Sherif	
SIGNATURE			
DATE			

Enppi PETROJET	EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE 1 & 2)	EGPC

Owner : Egyptian General Petroleum Corporation (EGPC)

Contractor CONSORTIUM (ENPPI / PETROJET)

Project No: 01251-100-030 :01251-100-031

Document No: ITR-QC-0001

Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : PANEL INSTALLATION

NOTIFICATION NO. : PTJ-ELE-RFI- 146

DISCIPLINE : ELE

DATE : 3/10/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	LIGHTING PANEL INSTALLATION	AGROOD#01					
	030-SUB-LPDP-1						

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :		Review	
SIGNATURE			
DATE			

Enppi PETROJET	EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE 1 & 2)	EGPC

LIGHTING SYSTEM

INSPECTION AND TEST REPORT FOR

LIGHTING / SMALL POWER PANEL INSTALLATION

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
RFI-146		ITR-EL-0005	ELECTRICAL	

JOB DESCRIPTION	AREA DESCRIPTION

ITEM / TAG NO.		TYPE	

NO.	INSPECTION	RESULT		
		ACCEPT	REJECT	N/A.
1	No damage has been found to equipment / component.	✓		
2	Correct type / size as per drawings.	✓		
3	Equipment foundation / supports are completed.			✓
4	Correct level / alignment / orientation as per drawings.	✓		
5	Identification / name plate - correct and properly attached.	✓		
6	Welding (if required) and touch up.			✓
7	Anchor bolting / Bolt correctly tightened.	✓		
8	Door locks operation / opening.			✓
9	Check all busbar connections.			✓
10	Check cable termination, connection, and cable marker.	✓		
11	Check on missing or loose part of lighting accessory properly.	✓		
12	All compartments to be cleaned internally and externally.	✓		
13	Earthing and bonding properly installed.		✓	

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :		Review	
SIGNATURE			
DATE			

Enppi | EGPC CRUDE OIL TANK FARM | EGPC

Owner : Egyptian General Petroleum Corporation (EGPC)

Project No: 01251-100-030 :01251-100-031

Contractor CONSORTIUM (ENPPI / PETROJET)

Document No: ITR-QC-0001
Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : CABLE TERMINATION AND TEST

NOTIFICATION NO. : PTJ-ELE-RFI- DISCIPLINE : ELEC

DATE : : 27/03/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
18	D2-030-SUB-ACUPS-1-BAT-A	SUBSTATION					
19	D1-030-SUB-ACUPS-1-BAT-B	SUBSTATION					
20	D2-030-SUB-ACUPS-1-BAT-B	SUBSTATION					
21	D1-030-SUB-DCUPS-CB-A	SUBSTATION					
22	D2-030-SUB-DCUPS-CB-A	SUBSTATION					
23	D1-030-SUB-DCUPS-CB-B	SUBSTATION					
24	D2-030-SUB-DCUPS-CB-B	SUBSTATION					
25	D1-030-SUB-DCUPS-1-BAT-A	SUBSTATION					
26	D2-030-SUB-DCUPS-1-BAT-A	SUBSTATION					
27	D1-030-SUB-DCUPS-1-BAT-B	SUBSTATION					
28	D2-030-SUB-DCUPS-1-BAT-B	SUBSTATION					
29	P-030-SUB-LPDP-1	SUBSTATION					
30	P-030-SUB-ASP-1	SUBSTATION					
31	P-030-EPM1-UPDP-1	SUBSTATION					
32	P1-030-SUB-ACUPS-1	SUBSTATION					
33	P-030-SUB-IRP-1	SUBSTATION					
34	D-030-SUB-LVSWG-1A	SUBSTATION					

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE			
DATE			

Enppi PETROJET	EGPC CRUDE OIL TANK FARM	EGPC

INSPECTION AND TEST REPORT FOR

CABLE TERMINATION AND SPLICING

SYSTEM NO.:

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
PTJ-ELE-RFI-	27/03/2021	ITR-EL-0009	ELEC	1 OF 1

Item/Tag NO.	For All Cables tages in PTJ-ELE-RFI-				
Type :-		Core:		Size:	

NO.	Description of check	RESUNT		
		ACCEPT	REJECT	N/A.
1	Check cable glands are correct type and size as per cable schedule.	✓		
2	Check there are no damages to cores, termination chamber layout is satisfactory, core identification is correct, crimped and pins satisfactory.	✓		
3	Check cable tag is done correctly.	✓		
4	Test and confirm conductor, phase continuity.	✓		
5	Check insulation resistance test (megger) is completed *'	✓		
6	Check Hi-pot test is completed, only for MV/HV cables *''			✓
7	Connect all cores at both ends and confirm all connections are correct as per termination diagram.	✓		
8	Confirm spare cores, screens are earthed and conform to design drawings/specifications	✓		✓
9	Check enclosure cover is installed , no damages and no bolts are missing	✓		
10	Calibration test certificate of testing equipment to be checked.	✓		

Remarks :

*' : ITR-EL-006A/B

*'' :ITR-EL-008

	PETROJET	ENPPI	PMC
NAME :		Reza Lotfi	
SIGNATURE			
DATE			

Enppi	EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE 1 & 2)	EGPC

LIGHTING SYSTEM

INSPECTION AND TEST REPORT FOR

LIGHTING FIXTURE INSTALLATION CHECK LIST

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
		ITR-EL-0003	ELECTRICAL	

TAG/ CIRCUIT No :	PANEL :	AREA/PACKGE :	SYSTEM NO.:

LAMP TYPE: ☐ FLOURESCENT ☐ HP SODUIM ☑ LED

FIXTURE TYPE: ☐ GROUND STANCHION ☐ PLATEFORM STANCHION ☐ BRACKET TYPE ☑ CEILLING MOUNTED ☐ STREET LIGHTING ☐ FLOODLIGHT TOWER ☐ FENCE LIGHTING ☐ GUARD LIGHTING

ITEM / TAG NO.		TYPE	

NO.	INSPECTION	RESULT		
		ACCEPT	REJECT	N/A.
1	No damage has been found to fixtures/junction box.	✓		
2	Correct type / size / identification as per drawings.	✓		
3	Identification / name plate attached correctly.		✓	
4	Lighting pole and support as per drawings.			✓
5	Welding (if required) and touch up.			✓
6	Anchor bolting / Bolt tightening.	✓		
7	Mounting height / orientation / direction / vertical aligment as per drawings.	✓		
8	Check cable termination, connection, and cable marker.	✓		
9	Assembling compartments properly installed.	✓		
10	Conduit /conduit filled by compound.			✓
11	Earthing and bonding properly installed.			✓
12	Lamp test			✓

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :		® Islam Sherif	
SIGNATURE			
DATE			

Enppi	EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE 1 & 2)	EGPC

Owner : Egyptian General Petroleum Corporation (EGPC)

Project No: 01251-100-030
:01251-100-031

Contractor CONSORTIUM (ENPPI / PETROJET)

Document No: ITR-QC-0001
Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : PHOTOCELL INSTALLATION

NOTIFICATION NO. : PTJ-ELE-RFI- 193 DISCIPLINE : E&I

DATE : : 5/2/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	PHOTOCELL INSTALLATION	AGROOD MODULE 01	2-May-21				

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

- Stainless steel tages must be installed. (Done) Sob

	PETROJET	ENPPI	PMC
NAME :		® Islam Sherif	
SIGNATURE	Sob		
DATE			

Enppi PETROJET	EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE 1 & 2)	EGPC

Owner : Egyptian General Petroleum Corporation (EGPC)	Project No: 01251-100-030 :01251-100-031
Contractor CONSORTIUM (ENPPI / PETROJET)	Document No: ITR-QC-0001 Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : LIGHTING FIXTURES INSTALLATION

NOTIFICATION NO. : PTJ-ELE-RFI- 187 DISCIPLINE : E&I

DATE : : 5/2/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	FIRST FLOOR LIGHTING INSTALLATION	AGROOD MODULE 01	2-May-21				
	INDOOR EMERGENCY CIRCUIT L4	21 FIXTURES					
	INDOOR EMERGENCY CIRCUIT L5	13 FIXTURES					
	INDOOR EMERGENCY CIRCUIT L6	15 FIXTURES					
	INDOOR EMERGENCY CIRCUIT L7	12 FIXTURES					
	INDOOR NORMAL CIRCUIT L4	19 FIXTURES					
	INDOOR NORMAL CIRCUIT L5	13 FIXTURES					
	INDOOR NORMAL CIRCUIT L6	8 FIXTURES					
	INDOOR NORMAL CIRCUIT L7	8 FIXTURES					

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE		® Islam Sherif	
DATE			

Enppi	EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE 1 & 2)	EGPC

LIGHTING SYSTEM

INSPECTION AND TEST REPORT FOR

LIGHTING FIXTURE INSTALLATION CHECK LIST

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
		ITR-EL-0003	ELECTRICAL	

TAG/ CIRCUIT No : PANEL : AREA/PACKGE : SYSTEM NO.:

LAMP TYPE: ☐ FLOURESCENT ☐ HP SODUIM ☑ LED

FIXTURE TYPE: ☐ GROUND STANCHION ☐ PLATEFORM STANCHION ☐ BRACKET TYPE ☑ CEILLING MOUNTED ☐ STREET LIGHTING ☐ FLOODLIGHT TOWER ☐ FENCE LIGHTING ☐ GUARD LIGHTING

ITEM / TAG NO.		TYPE	

NO.	INSPECTION	RESULT		
		ACCEPT	REJECT	N/A.
1	No damage has been found to fixtures/junction box.	✓		
2	Correct type / size / identification as per drawings.	✓		
3	Identification / name plate attached correctly.			✓
4	Lighting pole and support as per drawings.			✓
5	Welding (if required) and touch up.			✓
6	Anchor bolting / Bolt tightening.	✓		
7	Mounting height / orientation / direction / vertical aligment as per drawings.	✓		
8	Check cable termination, connection, and cable marker.	✓		
9	Assembling compartments properly installed.	✓		
10	Conduit /conduit filled by compound.			✓
11	Earthing and bonding properly installed.			✓
12	Lamp test	✓		

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE		® Islam Sherif	
DATE			

Enppi	EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE 1 & 2)	EGPC

LIGHTING SYSTEM

INSPECTION AND TEST REPORT FOR

POWER OUTLET INSTALLATION CHECK LIST

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
		ITR-EL-0004	ELECTRICAL	

TAG :	CIRCUIT No :	PANEL :	AREA/PACKGE :	SYSTEM NO.:
TYPE:	☐ WELDING RECEPTACLE		☐ CONVIENCE OUTLET	

ITEM / TAG NO.		TYPE	

NO.	INSPECTION	RESULT		
		ACCEPT	REJECT	N/A.
1	No damage has been found to devices/switches.	✓		
2	Correct type / size / identification as per drawings.	✓		
3	Identification / name plate attached correctly.			✓
4	Welding (if required) and touch up.			✓
5	Anchor bolting / Bolt tightening.	✓		
6	Mounting height / orientation / direction as per drawings.	✓		
7	Check cable termination, connection, and cable marker.	✓		
8	Assembling compartments properly installed.	✓		
9	Conduit /conduit filled by compound.			✓
10	Earthing and bonding properly installed.			✓

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :		® Islam Sherif	
SIGNATURE			
DATE			

Enppi

EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE 1 & 2)

EGPC

Owner :	Egyptian General Petroleum Corporation (EGPC)	Project No: 01251-100-030 :01251-100-031
Contractor	CONSORTIUM (ENPPI / PETROJET)	Document No: ITR-QC-0001 Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : LIGHTING FIXTURES INSTALLATION

NOTIFICATION NO. : PTJ-ELE-RFI- 189 DISCIPLINE : E&I

DATE : : 5/2/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	CELLAR LIGHTING INSTALLATION	AGROOD MODULE 01	2-May-21				
	INDOOR EMERGENCY CIRCUIT L1	14 FIXTURES					
	INDOOR EMERGENCY CIRCUIT L2	12 FIXTURES					
	INDOOR EMERGENCY CIRCUIT L3	12 FIXTURES					
	INDOOR NORMAL CIRCUIT L1	8 FIXTURES					
	INDOOR NORMAL CIRCUIT L2	15 FIXTURES					
	INDOOR NORMAL CIRCUIT L3	11 FIXTURES					

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

- Stainless steel tages must be installed.

	PETROJET	ENPPI	PMC
NAME :		® Islam Sherif	
SIGNATURE			M. Omar
DATE			

Enppi	EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE 1 & 2)	EGPC

LIGHTING SYSTEM

INSPECTION AND TEST REPORT FOR

LIGHTING FIXTURE INSTALLATION CHECK LIST

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
		ITR-EL-0003	ELECTRICAL	

TAG/ CIRCUIT No : PANEL : AREA/PACKGE : SYSTEM NO.:

LAMP TYPE: ☐ FLOURESCENT ☐ HP SODUIM ☑ LED

FIXTURE TYPE: ☐ GROUND STANCHION ☐ PLATEFORM STANCHION ☐ BRACKET TYPE ☑ CEILLING MOUNTED ☐ STREET LIGHTING ☐ FLOODLIGHT TOWER ☐ FENCE LIGHTING ☐ GUARD LIGHTING

ITEM / TAG NO.		TYPE	

NO.	INSPECTION	RESULT		
		ACCEPT	REJECT	N/A.
1	No damage has been found to fixtures/junction box.	✓		
2	Correct type / size / identification as per drawings.	✓		
3	Identification / name plate attached correctly.		✓	
4	Lighting pole and support as per drawings.			✓
5	Welding (if required) and touch up.			✓
6	Anchor bolting / Bolt tightening.	✓		
7	Mounting height / orientation / direction / vertical aligment as per drawings.	✓		
8	Check cable termination, connection, and cable marker.	✓		
9	Assembling compartments properly installed.	✓		
10	Conduit /conduit filled by compound.			✓
11	Earthing and bonding properly installed.			✓
12	Lamp test	✓		

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :		® Islam Sherif	
SIGNATURE			M. Omar
DATE			

Enppi	EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE 1 & 2)	EGPC

LIGHTING SYSTEM

INSPECTION AND TEST REPORT FOR

POWER OUTLET INSTALLATION CHECK LIST

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
		ITR-EL-0004	ELECTRICAL	

TAG :	CIRCUIT No :	PANEL :	AREA/PACKGE :	SYSTEM NO.:
TYPE:	☐ WELDING RECEPTACLE		☐ CONVIENCE OUTLET	

ITEM / TAG NO.		TYPE	

NO.	INSPECTION	RESULT		
		ACCEPT	REJECT	N/A.
1	No damage has been found to devices/switches.	✓		
2	Correct type / size / identification as per drawings.	✓	✓	
3	Identification / name plate attached correctly.			
4	Welding (if required) and touch up.			✓
5	Anchor bolting / Bolt tightening.	✓		
6	Mounting height / orientation / direction as per drawings.	✓		
7	Check cable termination, connection, and cable marker.	✓		
8	Assembling compartments properly installed.	✓		
9	Conduit /conduit filled by compound.			✓
10	Earthing and bonding properly installed.			✓

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :		® Islam Sherif	
SIGNATURE			M. omar
DATE			

Enppi PETROJET	EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE 1 & 2)	EGPC

Owner : Egyptian General Petroleum Corporation (EGPC)

Project No: 01251-100-030 :01251-100-031

Contractor CONSORTIUM (ENPPI / PETROJET)

Document No: ITR-QC-0001
Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : LIGHTING FIXTURES INSTALLATION

NOTIFICATION NO. : PTJ-ELE-RFI- 191 DISCIPLINE : E&I

DATE : : 5/2/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	OUTDOOR LIGHTING INSTALLATION	AGROOD MODULE 01	2-May-21				
	OUTDOOR EMERGENCY CIRCUIT L8	14 FIXTURES					
	OUTDOOR EMERGENCY CIRCUIT L9	6 FIXTURES					
	OUTDOOR NORMAL CIRCUIT L8	6 FIXTURES					
	OUTDOOR NORMAL CIRCUIT L9	16 FIXTURES					
	OUTDOOR NORMAL CIRCUIT L10	4 FIXTURES					

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :		Islam Sherif	
SIGNATURE			
DATE			

Enppi	EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE 1 & 2)	EGPC

LIGHTING SYSTEM

INSPECTION AND TEST REPORT FOR

LIGHTING FIXTURE INSTALLATION CHECK LIST

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
		ITR-EL-0003	ELECTRICAL	

TAG/ CIRCUIT No : PANEL : AREA/PACKGE : SYSTEM NO.:

LAMP TYPE: ☐ FLOURESCENT ☐ HP SODUIM ☑ LED

FIXTURE TYPE: ☐ GROUND STANCHION ☐ PLATEFORM STANCHION ☐ BRACKET TYPE ☑ CEILLING MOUNTED ☐ STREET LIGHTING ☐ FLOODLIGHT TOWER ☐ FENCE LIGHTING ☐ GUARD LIGHTING

ITEM / TAG NO.		TYPE	

NO.	INSPECTION	RESULT		
		ACCEPT	REJECT	N/A.
1	No damage has been found to fixtures/junction box.	✓		
2	Correct type / size / identification as per drawings.	✓		
3	Identification / name plate attached correctly.		✓	
4	Lighting pole and support as per drawings.			✓
5	Welding (if required) and touch up.			✓
6	Anchor bolting / Bolt tightening.	✓		
7	Mounting height / orientation / direction / vertical aligment as per drawings.	✓		
8	Check cable termination, connection, and cable marker.	✓		
9	Assembling compartments properly installed.	✓		
10	Conduit /conduit filled by compound.			✓
11	Earthing and bonding properly installed.			✓
12	Lamp test	✓		

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :		Ibrahim Sherif	
SIGNATURE			
DATE			

Enppi PETROJET	EGPC CRUDE OIL TANK FARM AGROOD AREA (MODULE 1 & 2)	EGPC

LIGHTING SYSTEM

INSPECTION AND TEST REPORT FOR

POWER OUTLET INSTALLATION CHECK LIST

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
		ITR-EL-0004	ELECTRICAL	

TAG : CIRCUIT No : PANEL : AREA/PACKGE : SYSTEM NO.:

TYPE: ☐ WELDING RECEPTACLE ☐ CONVIENCE OUTLET

ITEM / TAG NO.		TYPE	

NO.	INSPECTION	RESULT		
		ACCEPT	REJECT	N/A.
1	No damage has been found to devices/switches.	✓		
2	Correct type / size / identification as per drawings.	✓		
3	Identification / name plate attached correctly.		✓	
4	Welding (if required) and touch up.			✓
5	Anchor bolting / Bolt tightening.	✓		
6	Mounting height / orientation / direction as per drawings.	✓		
7	Check cable termination, connection, and cable marker.	✓		
8	Assembling compartments properly installed.	✓		
9	Conduit /conduit filled by compound.			✓
10	Earthing and bonding properly installed.			✓

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :		Islam Sherif	
SIGNATURE			
DATE			

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

12.08- FAT Reports & Certificates

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

12.09- SAT Reports & Certificates

PETROJET Enppi

Petroleum Pipelines Company
شركة أنابيب البترول

EGPC

Indoor and Outdoor Lighting Lux Test
Certificate of Completion and Acceptance

Client	Egyptian General Petroleum Corporation (EGPC)
Project No.	1251-100
Project Description	Crude Oil Tank Farm Project
Location	Agrood Area 30 (Module-01)
Systems	• (030-EL-007) Substation Building Lighting and Small Power System • (030-EL-014) Plant Area Lighting and Small Power System
Completion Date	27 of October 2021
Attachments	• Lux Test Measurements Values.

Remarks

- This is to certify that the systems described in this certificate of completion has been lux tested using a calibrated lux meter after final installation and signing of the mechanical completion and RFSU for all lighting systems in accordance with the requirements of the scope of work.
- Lux test has been witnessed by client representatives and accepted as complete in all aspects on the data marked on the certificate of completion and acceptance.
- The test has been completed to the client satisfaction with no comments raised.

Performed by **PETROJET**	Supervised by **ENPPI**	Approved by **PPC**
Name: Sobhy Seleem	Name:	Name: Mohamed Ibrahim
Title: ESI Qc Engineer	Title:	Title: Elec. manager.
Signature:	Signature: ® Islam Sherif	Signature:
Date: 28-10-2021	Date:	Date: 28-10-2021

Enppi PETROJET

EGPC

Lux Test Reading for Outdoor and Indoor Lighting for Agrood Area 30 (Module-01)

Location	API RP 540 Value (Lux)	Actual Tested Value (Lux)
Indoor (SWG Room)	50	425
Indoor (Control Room)	50	575
Indoor (Office Room)	50	592
Indoor (Cellar Room)	50	67
Indoor (Telecom. Room)	50	570
Indoor (Security Room)	50	685
Indoor (Battery Room)	50	375
Outdoor (Tank 01 Dike)	5	9
Outdoor (Tank 02 Dike)	5	11
Outdoor (Tank 03 Dike)	5	10
Outdoor (Tank 04 Dike)	5	10
Fire Pumps Area	50	75
Shipping Pumps Area	50	55
Northern Street	10	30
Southern Street	10	30
Eastern Street	10	35
Western Street	10	35

Remarks:

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

12.10- Electrical Pre-Commissioning Check Lists

Enppi

PRE-COMMISSIONING CHECK LIST
LIGHTING AND SMALL POWER MATERIAL
EL-23 A

PROJECT TITLE	: CRUDE OIL TANK FARMS PROJECT, AGROOD AREA 30 (MODULE-1)		
PROJECT NUMBER	: 01251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Building Lighting and small power system	**SYSTEM ID**	: 030-EL-007
SUB-SYSTEM NAME	:	**SUB-SYSTEM ID**	:
ITEM TAG No.	: 030-SUB-LPDP - 1 Power Distrbution Panel	**AREA**	:
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check to ensure that all the fittings meet the requirement of Hazardous area classification.	✓	
3	Check location and fixing method of light fittings in accordance with approved drawings.	✓	
4	Inspect light fittings for mechanical damage.	✓	
5	Check that lighting equipments are correctly located and not obstructed by other equipments.	✓	
6	Check equipment fixings and mountings are secure.	✓	
7	Check equipment fixings and mountings are secure.	✓	
8	Check circuit numbering and correct identification label.	✓	
9	Earthing connections to the earthing grid to be checked.	✓	
10	Check lighting fixture inside & outside cleaning.	✓	
11	Check lighting fixture/junction box for sealing & tightening.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME		Islam Sherif	
SIGNATURE			
DATE			

10000-Z-000-EK7-TMP-0012 (03/14)

Enppi

PRE-COMMISSIONING CHECK LIST
LIGHTING AND SMALL POWER MATERIAL
EL-23 A

PROJECT TITLE	: CRUDE OIL TANK FARMS PROJECT, AGROOD AREA 30 (MODULE-1)		
PROJECT NUMBER	: 01251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Building Lighting and small power system	**SYSTEM ID**	: 030-EL-007
SUB-SYSTEM NAME	:	**SUB-SYSTEM ID**	:
ITEM TAG No.	: 030-SUB-LPDP - 1 Power Distrbution Panel	**AREA**	:
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
12	Junction boxes are well sealed and holes that are not used to be plugged with plugs suiting hazardous area classification.	✓	
13	Connection of photo-cells to be checked as per approved documents.	✓	
14	Check the lighting fixtures are installed in such a way that the maintenance become easily & safely.	✓	
15	Refer to small power distribution panel checks.	✓	
16	Contractor marked up drawings is available.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME		Islam Sherif	
SIGNATURE			
DATE			

10000-Z-000-EK7-TMP-0012 (03/14)

Enppi

PRE-COMMISSIONING CHECK LIST
SOCKETS
EL-24 A

PROJECT TITLE	: CRUDE OIL TANK FARMS PROJECT, AGROOD AREA 30 (MODULE-1)		
PROJECT NUMBER	: 01251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Building Lighting and small power system	**SYSTEM ID**	: 030-EL-007
SUB-SYSTEM NAME	:	**SUB-SYSTEM ID**	:
ITEM TAG No.	: 030-SUB-LPDP - 1 Power Distrbution Panel	**AREA**	:
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check to ensure that all the sockets fittings meet the requirement of Hazardous area classification.	✓	
3	Check location and fixing method of sockets in accordance with approved drawings.	✓	
4	Inspect sockets for mechanical damage.	✓	
5	Check that sockets are correctly located and not obstructed by other equipments.	✓	
6	Check equipment fixings and mountings are secure.	✓	
7	Check cable circuit connections to sockets against the approved drawing.	✓	
8	Check circuit numbering and correct identification label.	✓	
9	Check sockets inside & outside cleaning.	✓	
10	Check sockets for sealing & tightening.	✓	
11	Earthing connections to the earthing grid to be checked.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME		Islam Sherif	
SIGNATURE			
DATE			

10000-Z-000-EK7-TMP-0032 (03/14)

PRE-COMMISSIONING CHECK LIST
SOCKETS
EL-24 A

PROJECT TITLE	: CRUDE OIL TANK FARMS PROJECT, AGROOD AREA 30 (MODULE-1)		
PROJECT NUMBER	: 01251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Building Lighting and small power system	**SYSTEM ID**	: 030-EL-007
SUB-SYSTEM NAME	:	**SUB-SYSTEM ID**	:
ITEM TAG No.	: 030-SUB-LPDP - 1 Power Distrbution Panel	**AREA**	:
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
12	Plugs of socket outlets fit properly and mechanical interlocks operate correctly.	✓	
13	Junction boxes are well sealed and holes that are not used to be plugged with plugs suiting hazardous area classification.	✓	
14	Contractor marked up drawings is available.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME		Islam Sherif	
SIGNATURE			
DATE			

Enppi

PRE-COMMISSIONING CHECK LIST
LOW VOLTAGE CABLES
EL-30 A

PROJECT TITLE	: CRUDE OIL TANK FARMS PROJECT, AGROOD AREA 30 (MODULE-1)		
PROJECT NUMBER	: 01251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Building Lighting and small power system	**SYSTEM ID**	: 030 - EL - 007
SUB-SYSTEM NAME	:	**SUB-SYSTEM ID**	:
ITEM TAG No.	: 030-SUB-LPDP - 1 Power Distrbution Panel	**AREA**	:
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check cables are correctly fixed to trays and supports.	✓	
3	Check cables through walls or ceilings are correctly sealed.	NA	
4	Check that all cables (power/ control) are installed in accordance with cable lists and approved documents.	✓	
5	Check identification tags of all conductors and wires.	✓	
6	Check connection, tightness, termination and joints of cables are correctly executed.	✓	
7	Check where conductors have been terminated using crimped connections; ensure the correct size and type of crimping lugs.	✓	
8	Check that the bending radius of cables is not less than the minimum established.	✓	
9	Cable markers to be installed before covering buried cables or cables in cable trays.	✓	
10	Tie wraps to be used for cable and wires fixation.	✓	
11	Cable connections shall be torque tested.	NA	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME			
SIGNATURE		® Islam Sherif	
DATE			

10000-Z-000-EK7-TMP-0014 (03/14)

PRE-COMMISSIONING CHECK LIST
LOW VOLTAGE CABLES
EL-30 A

PROJECT TITLE	: CRUDE OIL TANK FARMS PROJECT, AGROOD AREA 30 (MODULE-1)		
PROJECT NUMBER	: 01251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Building Lighting and small power system	**SYSTEM ID**	: 030-EL-007
SUB-SYSTEM NAME	:	**SUB-SYSTEM ID**	:
ITEM TAG No.	: 030-SUB-LPDP - 1 Power Distrbution Panel	**AREA**	:
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
12	Check that buried cables are correctly covered and protected.	✓	
13	Trench markers to be checked w.r.t approved documents.	NA	
14	Check cable glands for tightness & check the correct type of gland has been used for the size and type of installed cables.	✓	
15	Inspect cable laid in trenches, segregation and protection.	✓	
16	Cables to be tested (continuity/insulation resistance). (*)	✓	
17	Equipment test report and inspection certificate to be-checked.	✓	
18	Check availability of vendor documents, including commissioning and start-up instructions. (If Any)	NA	
19	Calibration test certificate of testing equipment to be checked.	NA	

REMARKS AND OBSERVATIONS :

(*) Refer to table (III).

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME			
SIGNATURE		Islam Sherif	
DATE			

PRE-COMMISSIONING CHECK LIST
LOW VOLTAGE CABLES
EL-30 A

INSULATION TEST

LOW VOLTAGE CABLES

CABLE VOLTAGE LEVEL	D.C TEST VOLTAGE	MINIMUM INSULATION RESISTANCE (M.OHMS).
1000V	1000V	200

TABLE [III]

NOTES:

Manufacture's test voltage & minimum values for insulation resistance should be referenced.

Enppi

PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

PROJECT TITLE	: CRUDE OIL TANK FARMS PROJECT, AGROOD AREA 30 (MODULE-1)		
PROJECT NUMBER	: 01251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Building Lighting and small power system	**SYSTEM ID**	: 030-EL-007
SUB-SYSTEM NAME	:	**SUB-SYSTEM ID**	:
ITEM TAG No.	: C-030-SUB-PC-1	**AREA**	:
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check cables are correctly fixed to trays and supports.	✓	
3	Check cables through walls or ceilings are correctly sealed.	NA	
4	Check that all cables are installed in accordance with cable lists and approved documents.	✓	
5	Check identification tags of all conductors and wires.	✓	
6	Check connection, termination and joints of cables are correctly executed.	✓	
7	Inspect cables for jacket damage.	✓	
8	Ensure that the correct size and type of crimping lugs have been used.	✓	
9	Check that the bending radius of cables is not less than the minimum established.	✓	
10	Cable markers to be installed before covering buried cables or cables in cable trays.	✓	
11	Tie wraps to be used for cable and wires fixation.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME		Islam Sherif	
SIGNATURE			
DATE			

10000-Z-000-EK7-TMP-0017 (03/14)

PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

PROJECT TITLE	: CRUDE OIL TANK FARMS PROJECT, AGROOD AREA 30 (MODULE-1)		
PROJECT NUMBER	: 01251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Building Lighting and small power system	**SYSTEM ID**	: 030-EL-007
SUB-SYSTEM NAME	:	**SUB-SYSTEM ID**	:
ITEM TAG No.	: C-030-SUB-PC-1	**AREA**	:
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
12	Trench markers to be checked w.r.t approved documents.	NA	
13	Check cable glands for tightness and check the correct type of gland has been used for the size and type of installed cables.	✓	
14	Inspect cable laid in trenches, segregation and protection.	✓	
15	Cables to be tested (continuity/insulation resistance).(*)	✓	
16	Equipment test report and inspection certificate to be-checked.	✓	
17	Check availability of vendor documents, including commissioning and start-up instructions. (If Any)	NA	
18	Calibration test certificate of testing equipment to be checked.	NA	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME		Islam Sherif	
SIGNATURE			
DATE			

PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

INSULATION TEST

EL-31 A

CABLE VOLTAGE LEVEL	D.C TEST VOLTAGE	MINIMUM INSULATION RESISTANCE (M.OHMS).
3.3kV	2500V	200
6.6kV & Above	5000V	200

TABLE [I]

NOTES:

Enppi

PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

PROJECT TITLE	: CRUDE OIL TANK FARMS PROJECT, AGROOD AREA 30 (MODULE-1)		
PROJECT NUMBER	: 01251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Building Lighting and small power system	**SYSTEM ID**	: 030-EL-007
SUB-SYSTEM NAME	:	**SUB-SYSTEM ID**	:
ITEM TAG No.	: P-030-SUB-LPDP-1	**AREA**	:
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check cables are correctly fixed to trays and supports.	✓	
3	Check cables through walls or ceilings are correctly sealed.	NA	
4	Check that all cables are installed in accordance with cable lists and approved documents.	✓	
5	Check identification tags of all conductors and wires.	✓	
6	Check connection, termination and joints of cables are correctly executed.	✓	
7	Inspect cables for jacket damage.	✓	
8	Ensure that the correct size and type of crimping lugs have been used.	✓	
9	Check that the bending radius of cables is not less than the minimum established.	✓	
10	Cable markers to be installed before covering buried cables or cables in cable trays.	✓	
11	Tie wraps to be used for cable and wires fixation.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME			
SIGNATURE			
DATE			

10000-Z-000-EK7-TMP-0017 (03/14)

PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

PROJECT TITLE	: CRUDE OIL TANK FARMS PROJECT, AGROOD AREA 30 (MODULE-1)		
PROJECT NUMBER	: 01251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Substation Building Lighting and small power system	**SYSTEM ID**	: 030-EL-007
SUB-SYSTEM NAME	:	**SUB-SYSTEM ID**	:
ITEM TAG No.	: P-030-SUB-LPDP-1	**AREA**	:
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
12	Trench markers to be checked w.r.t approved documents.	NA	
13	Check cable glands for tightness and check the correct type of gland has been used for the size and type of installed cables.	✓	
14	Inspect cable laid in trenches, segregation and protection.	✓	
15	Cables to be tested (continuity/insulation resistance).(*)	✓	
16	Equipment test report and inspection certificate to be-checked.	✓	
17	Check availability of vendor documents, including commissioning and start-up instructions. (If Any)	NA	
18	Calibration test certificate of testing equipment to be checked.	NA	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME			
SIGNATURE			
DATE			

PRE-COMMISSIONING CHECK LIST
MEDIUM VOLTAGE CABLES
EL-31 A

INSULATION TEST

EL-31 A

CABLE VOLTAGE LEVEL	D.C TEST VOLTAGE	MINIMUM INSULATION RESISTANCE (M.OHMS).
3.3kV	2500V	200
6.6kV & Above	5000V	200

TABLE [I]

NOTES:

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

12.11- Electrical Supplier Check Lists & Reports

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

13- Electrical Commissioning

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

13.01- Electrical -Commissioning Check Lists

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

13.02- Electrical Supplier Check Lists & Reports

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

14- Red Marked-up Drawings

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

14.01- P&ID

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

14.02- Instrumentation Drawings

System ID	030-EL-007
System Description	Substation Building Lighting and small power system

14.03- Electrical Drawings